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# HELMINTHOLOGICAL ABSTRACTS

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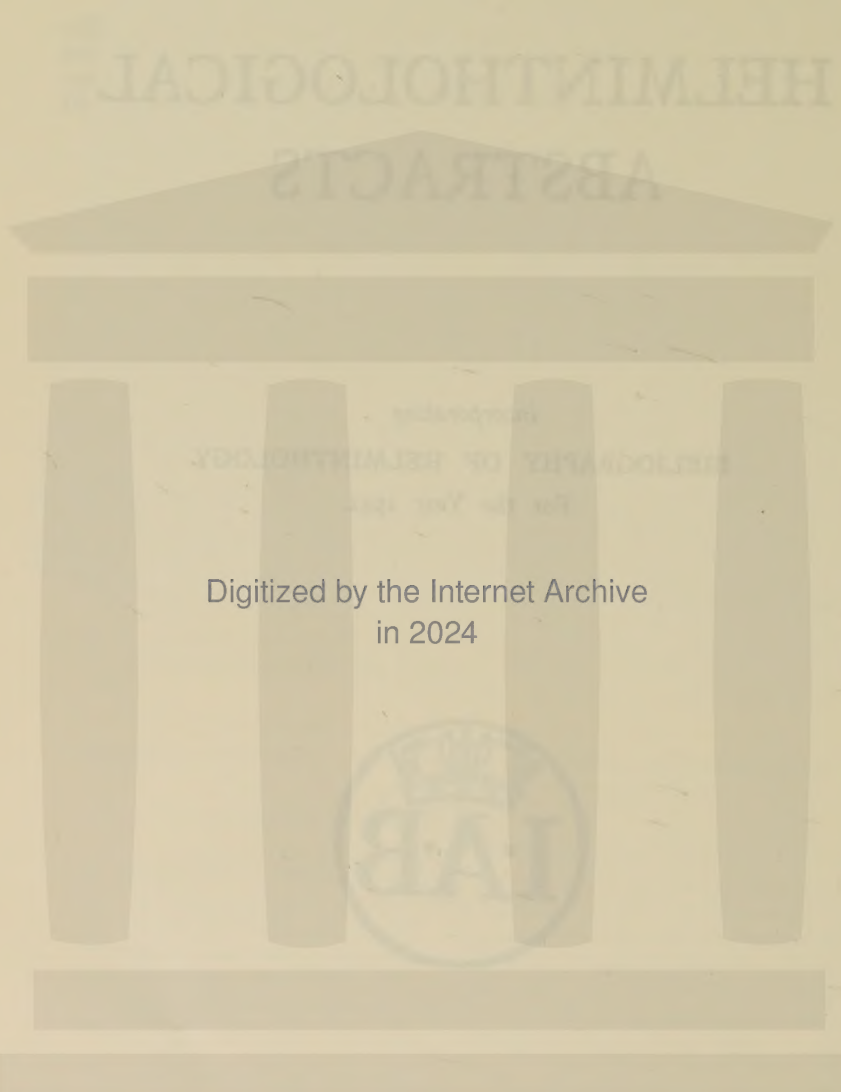
BIBLIOGRAPHY OF HELMINTHOLOGY

For the Year 1941.



IMPERIAL BUREAU OF AGRICULTURAL PARASITOLOGY  
(HELMINTHOLOGY)

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# HELMINTHOLOGICAL ABSTRACTS

INCORPORATING BIBLIOGRAPHY OF HELMINTHOLOGY  
FOR THE YEAR 1941.

Vol. X, Part 4.

## 199—Acta Medica Philippina.

- a. AFRICA, C. M. & GARCIA, E. Y., 1941.—“Anomalous organ-localization of *Schistosoma japonicum* in experimentally infected monkeys (*Macacus cynomolgus*).” 2 (4), 511-525.

(199a) Sexually mature males and egg-laying females of *Schistosoma japonicum* were present in the inferior vena cava and right cavities of the heart in 2 experimentally infected monkeys.  
R.T.L.

## 200—Actualidad Médica. Granada.

- \*a. INSAUSTI, J. L. & OLIVA, E., 1941.—“Quiste hidatídico del riñón.” 17, 329-333.

## 201—Agricultural Bulletin. Palestine.

- a. DEOUELL, J. M., 1941.—“Parasitic gastro-enteritis or stomach worm disease of sheep and goats in Palestine.” Year 1941, pp. 192-196.

## 202—American Journal of Hygiene. Section D. Helminthology.

- a. OTTO, G. F., 1941.—“Further observations on the immunity induced in dogs by repeated infections with the hookworm, *Ancylostoma caninum*.” 33 (2), 39-57.  
b. MILLER, M. J., 1941.—“Quantitative studies on *Trichocephalus vulpis* infections in dogs.” 33 (2), 58-70.  
c. LAWLER, H. J., 1941.—“The relation of vitamin A to immunity to *Strongyloides* infection.” 34 (3), 65-72.  
d. MAUSS, E. A., 1941.—“The serum fraction with which anti-*Trichinella* (*Trichinella spiralis*) antibody is associated.” 34 (3), 73-80.

(202a) Otto shows experimentally that a high degree of immunity against hookworm can be induced in dogs by the graded administration of larvae *per os* over a period of months as well as by subcutaneous injections. The immunity is never complete as the animal never becomes worm-free and the worms that remain are in sufficient numbers to bring about typical anaemia. If each crop of hookworms is however removed by means of an anthelmintic after their arrival in the intestine, then the onset of acute anaemia is prevented but the resistance factor is developed normally.  
P.A.C.

(202b) Miller shows experimentally that dogs do not develop a natural resistance to infection with eggs of *Trichuris vulpis* with increasing age but in some cases there seems to be developed an acquired resistance following infection. An infection already installed may be partly or wholly eliminated. Such resistance may also develop following repeated feedings of eggs. Once the egg output has reached its maximum it tends to remain fairly constant until the host resistance develops or until the diet is changed. There tends to be a preponderance of females, each of which is capable of passing about 2,000 eggs per day, though this number tends to vary with the intensity of the infection—being fewer in heavy infections and more in light ones.  
P.A.C.

(202c) In an investigation concerning the response of rats to *Strongyloides* infection while fed a diet deficient in vitamin A, Lawler shows that the rat can use any source of stored vitamin

\* Titles so marked throughout this number have not been seen in the original.



in retaining and developing its resistance. But when these stores are exhausted there is less resistance to a primary infection, and less immunity to further infections is acquired. This breakdown is not limited to the local action of the intestinal epithelium but the whole relations of the reticulo-endothelial system are involved, for this is concerned very closely with vitamin A metabolism. P.A.C.

(202d) Mauss suggests from experimental evidence that *Trichinella* antibody is closely associated with the globulin fraction of the host serum. If this is so it would bring antibodies of helminth parasites into line with those of bacterial parasites. This fraction gave a high protective faculty to mice. It caused marked precipitation within an hour round *Trichinella* larvae, and also fixed complement to a high degree and reduced the infectivity of larvae *in vitro*. A further concentration of the serum suggests that the antibody is more closely associated with euglobulin than with the pseudo-globulin fraction. P.A.C.

### 203—American Journal of the Medical Sciences.

- a. MOST, H. & HELPERN, M., 1941.—“The incidence of trichinosis in New York City.” 202 (2), 251-257.

(203a) *Trichinella spiralis* cysts were recovered from 22 out of 100 bodies of persons who had died in New York City suddenly from natural causes or by violence. There was evidence of re-infection in some cases. R.T.L.

### 204—American Journal of Nursing.

- \*a. JACOBS, L., 1941.—“Tapeworm diseases.” 41, 754-758.

### 205—American Journal of Pathology.

- a. ASHBURN, L. L., 1941.—“Appendiceal oxyuriasis. Its incidence and relationship to appendicitis.” 17 (6), 841-856.

### 206—American Journal of Tropical Medicine.

- a. McMULLEN, D. B. & BRACKETT, S., 1941.—“The distribution and control of schistosome dermatitis in Wisconsin and Michigan.” 21 (6), 725-729.

(206a) None of the present methods for the control of schistosome dermatitis in North America are completely satisfactory. The fish-killing properties of copper sulphate have been exaggerated. 10 to 100 parts per million were harmless to fish in the natural lake waters of Michigan. The combination of 1 part of copper carbonate and 2 parts of copper sulphate used at the rate of 3 lb. per 1,000 sq. ft. gave the best results. R.T.L.

### 207—American Midland Naturalist.

- a. MIZELLE, J. D., 1941.—“Studies on monogenetic trematodes. V. Tetraonchinae of the stump-knocker sunfish, *Eupomotis microlophus* (Guenther).” 26 (1), 98-104.  
b. MIZELLE, J. D. & BLATZ, V., 1941.—“Studies on monogenetic trematodes. VI. Two new dactylogyrid genera from Florida fishes.” 26 (1), 105-109.

(207a) Mizelle records five species of monogenetic trematodes from the sunfish, *Eupomotis microlophus*, including *Urocleidus attenuatus* n. sp. and *Actinocleidus bifurcatus* n. sp. A.E.F.

(207b) Mizelle & Blatz describe and figure *Rhabdosynochus rhabdosynochus* n.g., n. sp. from *Centropomus undecimalis*, and *Neodiplectanum wenningeri* n.g., n. sp. from *Eucinostomus gula*. A.E.F.

### 208—American Naturalist.

- a. ZELIFF, C. C., 1941.—“Observations on *Cathaemasia reticulata*, a trematode from the belted kingfisher.” 75 (760), 508-512.

### 209—Anais Brasileiros de Ginecologia.

- \*a. FERNANDES, M. & LAPA, R., 1941.—“Quistosomose de Manson com localização ovariana associada à hiperplasia glandular cística do endométrio.” 11, 427-433.



## 210—Annals of Applied Biology.

- a. GADD, C. H. & LOOS, C. A., 1941.—“Host specialization of *Anguillulina pratensis* (de Man). I. Attractiveness of roots.” 28 (4), 372-381.  
 b. GADD, C. H. & LOOS, C. A., 1941.—“Host specialization of *Anguillulina pratensis* (de Man). II. Behaviour of the parasite within roots.” 28 (4), 382-388.

(210a) Gadd & Loos report on methods of measuring the attractiveness of roots to *Anguillulina pratensis* and the larvae of *Heterodera marioni*. They show that entry into roots involves attractiveness plus ability to enter. Larvae of *A. pratensis* do not enter roots from sand as readily as do adults owing to their weaker muscular power. Neither adults of *A. pratensis* nor larvae of *H. marioni* enter recently killed or decaying roots though they may be attracted to them. A measure of the attractiveness of roots alone does not offer a reliable criterion of the true susceptibility of such roots. T.G.

(210b) Gadd & Loos have compared the behaviour of the females of *Anguillulina pratensis* after entry into the roots of various plants. In the roots of tea and *Tephrosia Vogelii* the worms settle down and, on the average, each lays 19 or more eggs in the course of 3 weeks, the larvae from which develop normally. In the roots of *Desmodium gyroides*, egg-laying is normal during the first week after entry but slows down later; an average of only 9 eggs being laid in 3 weeks and many worms leave roots after egg-laying. In roots of *Crotalaria anagyroides* and turnip few eggs are laid and many females leave without laying eggs. Few eggs hatch in roots of *C. anagyroides*. Resistance of roots to attack by *A. pratensis* is not resistance to entry but is connected with the unsuitability of the root for normal development of the parasite. T.G.

## 211—Annals of the Natal Museum.

- a. WARREN, E., 1941.—“On the occurrence of nematodes in the haemocoel of certain gamasid mites.” 10 (1), 79-94.

(211a) Warren describes 4 species of *Acarinocola* from the haemocoel of gamasid mites from Kent and Warwickshire, England. The unfertilized young female enters the mite and produces mature eggs, embryos and larvae, though there is no trace of sperm and no males are found in the host. The quadrangular body of the worm is without mouth, anus, vulva or intestine, though the young show rudiments of an oesophagus and nerve centre. The larvae are syncytial, lack epithelium, and have nuclei scattered irregularly; these latter become arranged later (which is in apparent disagreement with the doctrine of fundamental layers). In *A. cuneifer* n. sp. from *Cosmolaelaps cuneifer*, and *A. claviger* n. sp. from *C. claviger* and *Hypoaspis* sp., embryos are freed by rupture of the hind end of the worm. These parasites contain endodermal mycetoma-like bodies which have deeply staining elements within, thought to be symbionts, which infect the ripe ova. In the larvae these exist as faintly basophilic bodies scattered in the general syncytium. In *A. terribilis* n. sp. from *Euryparasitus terribilis*, the mature worm is much more degenerate and liberates larvae from its ruptured hind end. *A. hirsutus* n. sp. from *Haemogamasus hirsutus* is similar though the material was unsuitable for detailed comparison. N.G.S.

## 212—Anzeiger für Schädlingskunde.

- \*a. REINMUTH, E., 1941.—“Verwechslung von Nematodeneikapseln mit *Juncus*-Samen.” 17, p. 10.

(212a) Reinmuth points out how seeds of the toad rush (*Juncus bufonis* L.) will float up from soil with cysts of *Heterodera schachtii*, which they closely resemble in size and colour, and with which they may very easily be confused. [From an abstract in Dtsch. tierärztl. Wschr., 49, 323-324.] M.T.F.

## 213—Archiv für Experimentelle Pathologie und Pharmakologie.

- a. OELKERS, H. A. & RATHJE, W., 1941.—“Zur Wirkungsweise der Anthelminthica.” 198 (3), 317-337.

(213a) Oelkers & Rathje have examined the action of a number of anthelmintics on *Enchytraeus albus*, *Ascaris lumbricoides*, leeches and earthworms *in vitro*, on denervated leech



muscle, and simple earthworm muscle preparations. In many cases the action of the c was similar. Thus thymol, ascaridol, hexylresorcinol, chlorthymol and chlorcarvacrol ca rapid paralysis in all tests. The results of toxicity tests on mice are given. A brief acc of the action of the anthelmintics on the isolated frog heart is also included.

#### 214—Archives de l'Institut Pasteur de Tunis.

- a. BROCC, R. & CALO, A., 1941.—“Étude sur les répercussions cardio-vasculaires de l'an stomiasse et d'autres helminthiases.” 30 (1/2), 77-102.

#### 215—Archives of Surgery.

- a. ARCE, J., 1941.—“Hydatid cyst of the liver.” 42 (6), 973-987.

#### 216—Archivio Italiano di Scienze Mediche Coloniali e di Parassitologia.

- \*a. GIANTURCO, V., 1941.—“Osservazioni sulla oncocercosi africana.” 22 (1), 7-29.

(216a) Gianturco gives a general account of *Onchocerca volvulus*, including morphol life-history, pathology, and the biting habits of its carrier, *Simulium damnosum*. [From abstract in Zbl. Bakt., 1. Abt. Ref., 140, 273-274.]

#### 217—Archivos de la Sociedad de Biología de Montevideo.

- \*a. PORZECANSKI, B., 1941.—“Reacciones microquímicas de la membrana hidática.” 218-222.

#### 218—Arquivos de Higiene e Saude Pública.

- a. PESSOA, S. B. & PASCALE, H., 1941.—“Sobre o método de Stoll-Hausheer para a conta de ovos nas fezes.” 6 (11), 13-22. [English summary p. 21.]  
 b. PESSOA, S. B. & PASCALE, H., 1941.—“Tratamento da ancilostomose pelo tetracloretileno.” 6 (11), 23-29. [English summary p. 29.]  
 c. PESSOA, S. B. & PASCALE, H., 1941.—“Intensidade da ancilostomose em algumas fazes de café no município de Ribeirão Preto.” 6 (11), 30-37. [English summary p. 37.]  
 d. PESSOA, S. B. & PASCALE, H., 1941.—“Análise da infestação pelo *Necator* em uma faz de café e cana no município de Sertãozinho.” 6 (11), 38-60. [English summary pp. 59-60.]  
 e. PESSOA, S. B. & PASCALE, H., 1941.—“Observações sobre o tratamento da ancilostom pelo tetracloretileno, baseadas em contagens de ovos, antes e depois da administração do remé” 6 (11), 61-65. [English summary pp. 64-65.]  
 f. PESSOA, S. B. & PASCALE, H., 1941.—“Intensidade da ancilostomose nos escolares de v municípios.” 6 (11), 66-71. [English summary p. 71.]  
 g. PESSOA, S. B. & PASCALE, H., 1941.—“Sobre a eliminação de *Necator americanus* *Ascaris lumbricoides* após tratamento antihelmíntico.” 6 (11), 72-76. [English sum p. 76.]  
 h. PESSOA, S. B. & LUCENA, D., 1941.—“Sobre a disseminação de helmintoses nos habita de uma localidade saneada.” 6 (11), 79-97. [English summary p. 97.]

(218a) Using the small drop method of Stoll & Hausheer the authors have studied faeces of 31 farm labourers infected with *Necator americanus*. The average ova passed female worm per gramme of faeces was 36.5 before treatment and 18 after treatment. slightly infected cases with an average of 9.8 females the index of 85.9 ova per gramme obtained, whereas in cases with an average of 104 females the ova passed averaged 28.9 female per gramme. In several cases which were negative to the Stoll-Hausheer method average of 5.8 worms were expelled by treatment.

(218b) About 95% of *Necator americanus* were removed by the administration of 4 of tetrachlorethylene given as a single dose in gelatin capsules. For children a mixture of tetrachlorethylene and oil of chenopodium in sweetened water or syrup is recommended.

(218c) From an examination of 626 colonists on 3 coffee farms in the State of São Pa by the Stoll method, it was found that men and women were equally infected, as were women and children working in the fields and those in the coffee plantations. They conc that the ground around those houses which are not provided with latrines is the usual so



of infection. They note that there is a natural decrease in intensity of infection after the age of 20.

R.T.L.

(218d) *Necator americanus* infections occur in 62% of the inhabitants at Fazenda Vassoural. Tables indicate that those colonies provided with sanitation have a lower infection than those without. High infections are more common in the white than in the black race. No relation was established between decrease in haemoglobin and intensity of infection.

R.T.L.

(218e) Carbon tetrachloride in the same doses as tetrachlorethylene is more effective in reducing the egg output in hookworm infections.

R.T.L.

(218f) The elementary school teacher should be given the task of educating rural school children in the fight against intestinal infections and of spreading sound sanitation principles.

R.T.L.

(218g) The collection of roundworms on the day after treatment is of no practical value in estimating the effect of anthelmintics, for large numbers are expelled on the second day. *Ascaris* is usually expelled by oil of chenopodium in the first two days.

R.T.L.

(218h) In a small locality of Santo Amaro where every house was provided with sanitary installations it was found that adults and children were considerably infected with helminths. In the dust of play grounds of isolated schools and in houses *Ascaris* eggs were found in 100% and hookworm eggs in 50%. *Oxyuris vermicularis* is a familial infection. The authors consider the family group is chiefly responsible for the spread of helminthiasis and they stress the important role which the school master should play in propaganda.

R.T.L.

## 219—Australian and New Zealand Journal of Surgery.

- a. REAY, E. R., 1941.—“Hydatid disease of the kidney.” 11 (1), 9-23.

## 220—Australian Veterinary Journal.

- a. GORDON, H. McL., 1941.—“The use of phenothiazine for the control of oesophagostomiasis (nodule worm disease) of sheep.” 17 (5), 166-172.  
 b. GORDON, H. McL. & WHITTEN, L. K., 1941.—“A note on variations in the efficiency of the copper sulphate and nicotine sulphate drench against *Haemonchus contortus*.” 17 (5), 172-176.  
 c. KAUZAL, G. P., 1941.—“Examination of grass and soil to determine the population of infective larval nematodes on pastures.” 17 (5), 181-184.  
 d. KAUZAL, G. P. & WHITTEN, L. K., 1941.—“A report on the failure of phenothiazine as an anthelmintic against the common nematodes of dogs in Australia.” 17 (5), 185-187.

(220a) Gordon states that *Oesophagostomum columbianum* is a serious cause of malnutrition in sheep in the areas of Queensland and New South Wales receiving a rainfall of 25 inches and more. For adult sheep, 25 g. of phenothiazine given as a drench in winter is recommended. Though effective against *Haemonchus* and *Trichostrongylus*, this drug should be reserved for *Oesophagostomum* owing to its high cost.

B.G.P.

(220b) Gordon & Whitten state that individual sheep which fail to respond to the copper and nicotine sulphates treatment against *Haemonchus* (probably owing to non-closure of the oesophageal groove) can be effectively treated with 2 ml. CCl<sub>4</sub> in 3 ml. liquid paraffin.

B.G.P.

(220c) In view of Taylor's results (1938-1939), Kauzal has again studied the problem of the population of nematode larvae on pastures. He concludes that an examination of the grass alone does not afford a sufficiently accurate basis for the estimation of infective larvae; a maximum of 16% of the larvae of *Haemonchus contortus* was recovered whereas the maximum recovered from the soil was 75%. The existing weather conditions were correlated with the considerable fluctuations in the numbers present in the soil and on the grass. He concludes that successful recovery of larvae from pastures “is dependent on the presence of an optimal number of grass blades on which migration may take place, on favourable weather conditions, and on the vitality of the larvae”.

R.T.L.

(220d) Kauzal & Whitten found that phenothiazine in doses of 1 to 10 g. was erratic, unsatisfactory or ineffective against ascarids, hookworms and *Trichuris* in 13 dogs of mixed ages.

B.G.P.



## 221—Bahia Medica.

- \*a. MAGALHÃES, A. & COELHO, B., 1941.—“Cancer e quistosomose.” 12, 7-16.

## 222—Bibliotek for Laeger.

- \*a. MADSEN, H., 1941.—[Helminths and helminthiasis.] 133, 113-145.

## 223—Boletin del Instituto de Clinica Quirurgica. Universidad de Buenos Aires.

- a. GARCÍA CAPURRO, F., 1941.—“Diagnóstico radiológico de la membrana hidatídica encarcelada importancia del signo de Ivanissevich.” 17 (141), 303-320.

## 224—Boletines y Trabajos. Academia Argentina de Cirugía.

- \*a. TEJERINA FOTHERINGHAM, W., 1941.—“Quiste hidatídico de pulmón a membrana encarcelada; lobectomía.” 25, 305-316.  
 \*b. CALCAGNO, B. N. & MANFREDI, F. J., 1941.—“Quiste hidatídico calcificado del hígado abierto en las vías biliares.” 25, 363-374.  
 \*c. DIEZ, J., 1941.—“La equinocosis primitiva del conducto raquídeo.” 25, 630-636.  
 \*d. CALCAGNO, B. N., 1941.—“Terapéutica biológica de la hidatidosis.” 25, 700-721.

## 225—British Medical Journal.

- a. BLYTH, W., 1941.—“Cysticercosis epilepsy.” [Correspondence.] Year 1941, 2 (4213), p. 492.  
 b. SEGAL, L. J., 1941.—“Cysticercosis epilepsy treated with sulphathiazole.” Year 1941, 2 (4219), p. 693.  
 c. ANON, 1941.—“Schistosome dermatitis.” [Annotation.] Year 1941, 2 (4219), p. 701.  
 d. CAWSTON, F. G., 1941.—“Abbreviated treatment for bilharziasis.” [Correspondence.] Year 1941, 2 (4219), p. 716.  
 e. LEIPER, R. T., 1941.—“Diagnosis of helminth cysts in the brain.” [Correspondence.] Year 1941, 2 (4221), p. 787.  
 f. BACON, L. J., 1941.—“Trichiniasis in Birmingham.” Year 1941, 2 (4225), 909-912.

(225a) Blyth states that the radiographic report on Dr. Ewing's case of cysticercosis epilepsy was inconclusive. There was an opaque object in the left frontal region but the degree of opacity was less than in the other cysts. R.T.L.

(225b) Segal describes a case with occasional loss of consciousness in a sailor who had served in the Mediterranean, the Baltic and in China. A shadow, about the size of a five-shilling piece, in the lung and a suggestion of one in the left maxillary antrum were seen by X-ray. Sulphathiazole (M & B 760) gave some improvement. R.T.L.

(225d) Cures were effected in 3 weeks in cases of *Schistosoma haematobium* by injecting 3.0 to 3.5 c.c. anthiomaline into the deltoid muscle 3 or 4 times in a week. The patients continued at work during the treatment. R.T.L.

(225e) Leiper commenting on Segal's case of “cysticercosis epilepsy” points out that the only parasites found were a hydatid cyst in the lung and a doubtful one in the antrum and suggests that as the patient had served in the Navy in China the case may be one of cerebral invasion with the eggs of *Schistosoma japonicum*. R.T.L.

(225f) In the spring of 1941 an outbreak of trichinosis occurred in Birmingham. 70 cases had an eosinophilia of 10% or more. In 6 the eosinophilia was 5.9% with a definite clinical picture and in 2 others there was a definite clinical picture but no eosinophil count. In 8 further cases the diagnosis was doubtful and in 16 suspected cases the symptoms were not considered to be due to trichinosis. R.T.L.

## 226—Bulletin de la Société de Pathologie Exotique.

- a. DESCHIENS, R. & RENAUDET, R., 1941.—“La réaction de fixation du complément dans le téniasis à *Taenia saginata*.” 34 (1/3), 17-25.  
 b. PIERAERTS, G., 1941.—“Étude sur le syndrome dépigmentation-oedème au Kasai. (Première partie).” 34 (1/3), 84-95.

(226a) Deschiens & Renaudet have manufactured two antigens from adult *Taenia saginata* material for use as a specific test in the complement fixation reaction. There were available



10 patients known to be carrying the helminths and 43 believed to be free. Only 40% of the infected men gave a positive reaction as did 11.63% of the non-infected. It is obvious that this test under their conditions has not a wide diagnostic value though it may give useful subsidiary evidence of infection.

P.A.C.

(226b) Pieraerts describes a syndrome, common in natives of central Africa from October to December and known locally as "Diboba", with two main features: (i) an ortho- or hypochromic anaemia characterized by absence of cellular evidence of blood regeneration; this is accompanied, as secondary symptoms, by myocardia, static oedema, and digestive disturbances; (ii) an actual loss of pigment in the skin and hair, often occurring in the absence of the anaemia symptoms. Hookworm is universal, and it is found that a combination of anthelmintic and iron therapy leads to far better results than either measure in isolation.

B.G.P.

#### 227—Canadian Medical Association Journal.

- a. BRICK, M. A. & DONOHUE, W. L., 1941.—"Granulomatous lymphadenitis caused by filariae." 45 (4), 315-317.

#### 228—Canadian Public Health Journal.

- a. KUITUNEN-EKBAUM, E., 1941.—"The incidence of trichinosis in humans in Toronto. Findings in 420 autopsies." 32 (11), 569-573.

(228a) The incidence of trichinosis in man in Canada appears to be low. Kuitunen-Ekbaum has examined diaphragms from 420 autopsies in Toronto. Of 300 from adults 6 were positive and of 120 from infants one was positive, this occurred in a 7-months-old foetus. The eosinophil count of the mother taken 3 weeks later gave 7%. All the examinations were made microscopically and by digestion. About 50 g. of muscle was digested in 0.5 pepsin, and 0.7 HCl in water at 37° C. for 18 to 24 hours. Of the 6 adults, 3 came from England and in 2 of these the cysts were calcified.

R.T.L.

#### 229—China Journal.

- a. WU, K., 1941.—"Snails as carriers of human parasitic disease in China." 34 (4), 173-183.

#### 230—Chinese Medical Journal.

- a. CHAO, L., 1941.—"A survey of the parasites of dogs, cats and rats made at Chengtu Szechwan, China." 59 (6), 550-564.  
b. LIU, H. L. & WONG, Y. R., 1941.—"The passage of numerous *Ascaris lumbricoides* from the male urethra. Report of a case." 59 (6), 570-574.

(230a) This part gives the results of an examination of 60 dogs at Chengtu. Three harboured *Clonorchis sinensis*, 1 had *Paragonimus westermani*. In 15 there were *Taenia*, apparently *T. hydatigena* and *T. multiceps*. The latter diagnosis is doubtfully given. In one dog 16 *T. echinococcus* were found. *Diphyllbothrium mansonii* (?) occurred in 16 dogs, *Dipylidium caninum* in 35 dogs. Sparganum was found once. The nematodes recorded are: *Toxocara canis* (21.7%), *Ancylostoma caninum* (82.5%), *A. braziliense* (45%), *Thelazia* (21.7%), *Dirofilaria immitis* (51.7%), *Spirocerca sanguinolenta* (16.4%). A useful list of helminths hitherto recorded in dogs in China is included.

R.T.L.

#### 231—Chirurg.

- \*a. KNERINGER, V., 1941.—"Durchwanderung eines Spulwurmes durch die Darmwand und die Bauchdecken nach Magenresektion." 13, 217-218.

#### 232—Comptes Rendus (Doklady) de l'Académie des Sciences de l'URSS.

- a. ACHMEROV, A. K., 1941.—"*Amurotaenia perccotti* n. gen., n. sp.—Vertreter einer neuen Cestoden-Ordnung." 30 (2), 191-192.

(232a) Achmerov describes and figures *Amurotaenia perccotti* n.g., n. sp. from the intestine of the fish *Percottus glehni*. It is placed in the order Nippotaeniidea Yamaguti, 1939. The new genus differs from *Nippotaenia* in that the single terminal sucker is much larger and more developed.

A.E.F.



## 233—Deutsche Medizinische Wochenschrift.

- \*a. BRANDT, M., 1941.—“Ueber Trichinose.” 67, 352-353.
- \*b. TORNACK, J. H., 1941.—“Ueber Zystizerkeninfektion.” 67 (23), 628-630.
- \*c. GAUPP, R., 1941.—“Die Gehirnzystizerkose.” 67, p. 1289.

(233a) Brandt discusses the occurrence of trichinosis in Posen and describes 2 human cases reported in 1940. He recommends the adoption of German methods of meat inspection together with the examination of wild carnivores. This would provide more accurate data on the incidence of trichinosis and would enable suitable control measures to be worked out. [From an abstract in Zbl. Bakt., I. Abt. Ref., 140, 274-275.] A.E.F.

(233b) Tornack describes two cases where cysticerciasis in man was diagnosed by X-ray examination [From an abstract in Z. Fleisch- u. Milchhyg., 51, 284-285.] A.E.F.

## 234—Deutsche Tierärztliche Wochenschrift.

- a. ENIGK, K., 1941.—“Die Bedeutung der *Onchocerca reticulata* (Filarioidea) für die Entstehung von Widerristfisteln beim Pferd.” 49 (19), 234-237.
- b. HOFFMANN, W., 1941.—“Ueber den Gehalt der Milch an organischen Chlorverbindungen nach Behandlung der Kühe mit Hexachloraethan.” 49 (43), 527-528.
- c. KAUKER, E., 1941.—“Enzootien unter Wassergefügel durch *Echinuria uncinata*.” 49 (49/50), 609-612.

(234a) Enigk reviews the literature on *Onchocerca reticulata* and fistulous withers in the horse and reports on his own investigations carried out in France. It is concluded that although it has not been definitely proved that *O. reticulata* causes fistulous withers (no experimental infections having yet been carried out) present-day knowledge shows it to be very probable. Enigk states that all horses suffering from fistulous withers examined by him harboured *O. reticulata*. He treated 2 horses with Antimosan (a dose of 80 c.c. repeated after 8 days) and found that all worms in the region of the withers had died off 2 and 4 days respectively after the 2nd dose. The simplest and cheapest control measure is said to be systematic treatment of all *Onchocerca* carriers: the elimination of *Culicoides* breeding places, though desirable, presents many difficulties. Enigk concludes that *O. cervicalis* is a synonym of *O. reticulata*. A.E.F.

(234b) Hoffmann has found that when cows are treated with hexachlorethane they excrete certain organic chlorine compounds in the milk. The amount varies according to the condition of the animal, the amount of the drug administered, the amount of milk and the time of milking. In 2 cows the average chlorine content in pure milk fat was 5.9 mg. chlorine per 100 g. fat. A.E.F.

(234c) Kauker reports severe and widespread infections with *Echinuria uncinata* in young ducks and geese in Wartheland (Posen) during the summers of 1940 and 1941. Mortality was very high, reaching 52%, 65% and even 100% in some districts. The symptoms and pathology of the disease are described. No treatment is known: as a control measure young birds should be kept from waters where the intermediate host (*Daphnia pulex* larvae) abound from June to September. A.E.F.

## 235—Deutsche Tropenmedizinische Zeitschrift.

- \*a. WETZEL, R., 1941.—“Zur Bekämpfung der Wurmkrankheiten der Haus- und Nutztiere in Afrika.” 45, 103-111.
- \*b. VOGEL, H., 1941.—“Die Bedeutung der Bilharziosen für Afrika.” 45, 278-282.
- \*c. MINNING, W., 1941.—“Immunbiologische Nachweismethoden bei Bilharziosen.” 45, 321-323.
- d. ERHARDT, A. & GIESER, A. M., 1941.—“Testierungsmethode für Oxyurenpräparate und chemotherapeutische Untersuchungen mit 430 Kl an der Oxyuriasis des Kaninchens.” 45 (17), 531-541.

(235a) Wetzel discusses in general terms the possibilities of applying preventive and therapeutic measures against the parasites of domestic animals—especially sheep—in Africa. [From an abstract in Zbl. Bakt., I. Abt. Ref., 140, 263-264.] B.G.P.

(235b) Discussing the significance of the African schistosomiasis, Vogel outlines the distribution of *S. haematobium*, *S. mansoni* and *S. intercalatum*, pointing out that the perennial



irrigation of the Nile delta has caused a great increase in the incidence and intensity of these diseases, which here show urinogenital complications and liver and spleen involvement. [From an abstract in Zbl. Bakt., 1. Abt. Ref., 140, 266-267.]

B.G.P.

(235d) Erhardt & Gieser point out that the usual methods of testing the effect of drugs on *Enterobius* are inadequate, and describe their own technique, using rabbits infected with *Passalurus ambiguus* as test animals. Before giving the drug the body cavity of the rabbit is opened up to make certain that it is infected (in a heavy infection worms can be seen through the intestinal wall); after administration all faeces are examined until the 4th day, when a post-mortem is carried out. Using this method with "430 KI" [an apparently new preparation which is not described] it was found that a single dose of 0.5 g. per kg. body weight was 100% efficient. As "430 KI" had already been used with great success against *Ancylostoma*, *Trichuris*, *Toxocara*, *Taenia* and *Dipylidium* in the cat, it is considered to be a universal remedy for intestinal helminths in animals.

A.E.F.

### 236—Farmers' Bulletin. U.S. Department of Agriculture.

a. THORNE, G., 1941.—"Control of sugar-beet nematode by crop rotation." No. 1514, 19 pp.

(236a) [This is a revision of the 1932 edition. For abstract see Helm. Abs., Vol. I, No. 366a.]

### 237—Gaceta Médica de México.

\*a. FOURNIER, R., 1941.—"Tratamiento de la tricocefalosis." 71, 364-366.

### 238—Gazzetta degli Ospedali e delle Cliniche.

\*a. GUGLIELMO, R. DI, 1941.—"Contributo alla conoscenza della diffusione dell'anchilostomiasi in provincia di Napoli." 62, 335-337.

### 239—Geneeskundig Tijdschrift voor Nederlandsch-Indië.

a. TJIONG NJAN HAN, 1941.—"Appendicitis door ascaris." 81 (18), 984-988. [English summary p. 987.]

b. BONNE, C., 1941.—"Echinostomiasis aan het Lindomeer in Centraal-Celebes." 81 (21), 1139-1167. [English summary pp. 1165-1167.]

c. BONNE, C., 1941.—"Vier echinostomen van den mensch in Nederlandsch-Indië, *Euparyphium ilocanum* (Garrison 1908), *Echinostoma lindoensis* Sandground en Bonne 1940, *Euparyphium malayanum* (Leiper 1911), *Euparyphium recurvatum* (v. Linstow 1873)." 81 (25), 1343-1357. [English summary p. 1357.]

d. BONNE, C., LIE KIAN JOE, MOLENKAMP, W. J. J. & MREYEN, F. W., 1941.—"*Wuchereria malayi*, de macrofilaria behoorende bij de *Microfilaria malayi*." 81 (28), 1487-1501. [English summary pp. 1500-1501.]

(239b) In spite of their morphological resemblance *Echinostoma lindoensis* and *E. revolutum* are not identical, for the latter, a natural parasite of ducks, was absent from ducks on Lake Lindoe in Central Celebes. Human infection with *E. lindoensis* can be acquired from *Anisus sarasinorum* by eating the mussel *Corbicula linduensis*, which is the second intermediate host.

R.T.L.

(239c) Descriptions and a diagnostic table are given of the 4 echinostomes, *Euparyphium ilocanum*, *E. malayanum*, *E. recurvatum* and *Echinostoma lindoensis* which have been reported from man in the Malayan Archipelago.

R.T.L.

(239d) A description of male and female *Wuchereria malayi* is based on specimens obtained from a patient in whose blood there were numerous *Microfilaria malayi*. *Microfilaria bancrofti* were absent. The worms closely resemble the adults of *W. bancrofti* and the main difference seems to be the number and shape of the male cloacal papillae and folds. The transverse corrugations present on the spicular apparatus which were not observed by Sundar Rao & Maplestone resemble those in *W. bancrofti*.

R.T.L.

## 240—Half-Yearly Journal of the Mysore University. Section B. Science.

- a. NAIDU, V. R., RAO, A. V. & RAJOU, R. A., 1941.—“Analysis of helminthic and protozoal infection in five hundred consecutive in-patients.” New Ser., 2 (1), 23-27.
- b. NAIDU, V. R., RAO, A. V. & RAJOU, R. A., 1941.—“A brief report on a survey of helminthic infection in one hundred and fifteen cadavers.” New Ser., 2 (1), 29-31.

(240a) Naidu & co-workers report on helminthic examination of 500 consecutive in-patients at the Krishnarajendra Hospital, Mysore. Hookworm was found in 23.2%, *Ascaris* in 24.8%, *Trichuris* in 3.6%, *Enterobius* in 0.6% and cestodes [unspecified] in 9.6%; 47.2% were negative. The infection rates are considerably lower than those found by Sweet in 1928, and the improvement is probably due to improvements in sanitary conditions and to the prophylactic measures adopted. A.E.F.

(240b) Of 115 cadavers examined in Mysore, 65 showed infection with helminths. There were 18 cases of hookworm. 2,427 helminths were recovered and 1,737 of these were classified, showing 61% hookworms (the ratio of *Ancylostoma* to *Necator* being 6:4), *Enterobius* 34%, *Ascaris* 35%, *Trichuris* 1%. A.E.F.

## 241—Indian Journal of Medical Research.

- a. MENON, T. B. & RAMAMURTI, B., 1941.—“The behaviour of the infective larvae of *Wuchereria bancrofti* with special reference to their mode of escape and penetration of skin.” 29 (2), 393-401.
- b. IYENGAR, M. O. T., 1941.—“Occurrence of *Wuchereria bancrofti* infection in a rural area.” 29 (3), 677-679.

(241a) The transmission of *Wuchereria bancrofti* by mosquitoes appears to require a stimulus for the larvae to penetrate the proboscis and a direct inoculation of the freed larvae into the bite puncture. The former is brought about by the active sucking of warm blood and the pressure from the bending of the labium. The larvae not only descend into the puncture alongside the stylets but stray out on to the dry margins where they die from desiccation. The larvae are unable to penetrate the unabraded skin or even abraded skin by their own movements. Infective larvae were kept alive for more than a week in human blood and yolk of egg but did not develop further. R.T.L.

(241b) In India the distribution of *Wuchereria bancrofti* is chiefly urban and is associated with a high incidence of stagnant waters heavily contaminated with decaying organic matter which is favourable to the breeding of *Culex fatigans*. Iyengar now records a 17% infection rate in 2 villages in the Birbhum district of Bengal where there was also a high malarial rate. The transmitter of both infections proved to be *Anopheles philippinensis* and a specimen of this mosquito was discovered in which both infections were present. R.T.L.

## 242—Indian Journal of Veterinary Science and Animal Husbandry.

- a. VAIDYANATHAN, S. N., 1941.—“Experimental infestation with *Fischoederius elongatus* in a calf at Madras.” 11 (3), p. 243.

(242a) Vaidyanathan confirms that Cercariae Indicae XXIX Sewell are the larvae of *Fischoederius elongatus*. 250 encysted cercariae fed to a calf produced 90 adults. The host showed no systematic disturbance. R.T.L.

## 243—Indian Medical Gazette.

- a. PASRICHA, C. L., PANJA, G. & BHADURI, N. V., 1941.—“*Capillaria hepatica* in a wild rat in Calcutta.” 76 (8), 475-476.
- b. HALA, H. L., 1941.—“Effect of sulphapyridine on roundworms in a child with pneumonia.” 76 (8), p. 482.
- c. HEILIG, R., 1941.—“Practical aspects on general anasarca, especially in malarial nephritis and hookworm disease.” 76 (9), 519-523.
- d. MAPLESTONE, P. A., 1941.—“*Trichostrongylus* infection in man.” 76 (12), 710-712.

(243b) A large number of *Ascaris* were passed by a 2-year-old child following the administration of sulphapyridine for bronchopneumonia. R.T.L.

(243d) A number of cases of “incurable hookworm infection” referred to Maplestone have proved to be infected with *Trichostrongylus* sp. Of 1,578 stools examined over a period



of 11 years in Calcutta, 173, i.e. 1.1%, contained trichostrongyle eggs. In Assam, Maplestone found the eggs on 20 occasions in about 2,000 examinations. R.T.L.

#### 244—Indian Veterinary Journal.

- a. DE CROOS, A. V., 1941.—“*Spirocerca sanguinolenta* in a bitch.” 18 (2), 104-106.
- b. RAO, K. S. P., 1941.—“Cutaneous microfilaria.” 18 (3), 170-171.

(244b) The clinical symptoms and treatment of microfilariae in the skin of 2 bullocks are briefly recorded. R.T.L.

#### 245—Journal of the American Medical Association.

- a. BROWN, P. B., 1941.—“Rodent control and trichinosis.” [Correspondence.] 117 (11), p. 954.

(245a) In connection with a State survey of the trichinosis problem in California, 261 garbage-fed pigs were examined and 13.8% found infected after a rodent control programme had been in operation for at least 2 years. The incidence of infection in Norway rats was 11.8% and the author concludes that this evidence does not support the thesis that rodent control is an effective means of reducing *Trichinella* infection of garbage-fed pigs. R.T.L.

#### 246—Journal of the American Veterinary Medical Association.

- a. QUOTRUP, E. R. & SHILLINGER, J. E., 1941.—“3,000 wild bird autopsies on western lake areas.” 99 (776), 382-387.
- b. BOLEY, L. E., LEVINE, N.D., WRIGHT, W. L. & GRAHAM, R., 1941.—“Treatment of Percheron horses for gastrointestinal parasites with a phenothiazine-carbon disulfide mixture.” 99 (776), 408-411.
- c. DIKMANS, G. ET AL., 1941.—“Parasitology.” [Committee report presented at the 78th Annual Meeting of the American Veterinary Medical Association, Indianapolis, August, 1941.] 99 (776), p. 441.
- d. SCHWARTZ, B., 1941.—“Requisites for a practical intracutaneous test for the detection of *Trichina* infection in swine.” 99 (777), 465-468.
- e. McCULLOCH, E. C. & MCCOY, J. E., 1941.—“Treatment of ovine taeniasis with lead arsenate.” 99 (777), 496-497.

(246a) Post-mortem examination of 3,000 wild birds composed of 19 different species, showed that 3.3% carried parasites, though the authors suggest that this figure would probably be higher if the examinations had been fuller. Cestode infections have sometimes had fatal results in Canada geese and mallards, and *Contracaecum* sp. in pelicans. Other *Platyhelminths* did not appear to do much damage though certain species were often present. The authors deal also with diseases not caused by helminths. P.A.C.

(246b) Boley & co-workers report good results as judged by egg-counts from dosing 44 horses with a mixture of 40 g. phenothiazine (against strongyles) and 24 c.c. carbon disulphide (against ascarids and bots), given in capsules after 36 hours fasting. Pre- and post-treatment examination of the blood and urine of 23 mares gave no evidence of anaemia or kidney damage. B.G.P.

(246c) Dikmans presents a brief interim report by the “Committee on Parasitology”, on the incidence and importance of parasites in wild and domestic animals in the U.S.A. and Canada. This relates to sheep in Canada and Texas, and to domestic animals in Florida. B.G.P.

(246d) Schwartz emphasises again that neither the microscopic nor the skin tests are accurate enough to warrant their use as a routine procedure for the detection of *Trichina* infection in pigs. *Trichina* antigen often produces apparently positive results in uninfected swine and on the other hand it fails to detect infections in pigs known to be carrying the helminth. Before the test can be accepted it must be refined so as to detect infections of varying intensity in all infected pigs and to give a clean bill of health to uninfected ones. It must be easily recognizable on all skins no matter what their condition and it must be quickly applied. P.A.C.

(246e) The administration of 0.5 g. of lead arsenate to yearling lambs appears to be an effective and reasonably safe remedy for *Moniezia* sp. 24 g. of phenothiazine had no effect.

R.T.L.

#### 247—Journal of Biological Chemistry.

- a. LESUK, A. & ANDERSON, R. J., 1941.—“Concerning the chemical composition of *Cysticercus fasciolaris*. II. The occurrence of cerebroside containing dihydrosphingosine and of hydrolecithin in *Cysticercus* larvae.” 139 (1), 457-469.
- b. COLLIER, H. B. & ALLEN, D., 1941.—“Inhibition of succinic dehydrogenase by phenothiazone.” 140 (2), 675-676.

(247a) Lesuk & Anderson found that the ether-insoluble lipids obtained from *Cysticercus fasciolaris* “larvae plus cyst membranes” consisted of a mixture of a saturated cerebroside and a hydrolecithin. The cerebroside fraction was composed largely of dihydrophrenosin which, on hydrolysis, gave galactone, phrenosinic acid, some lower fatty acids and an unusual cerebroside component which agreed in composition with dihydrosphingosine. The hydrolecithin was essentially dipalmitolecithin and the products of its hydrolysis were palmitic acid, glycerophosphoric acid, choline, and a substance corresponding in composition with tetracosanoic acid.

W.P.R.

(247b) Collier & Allen, as a result of manometric observations on the activity of beef heart preparations (Stotz and Hastings method) in the presence of phenothiazone, suggest that the reversible system phenothiazone-leucophenothiazone strongly inhibits the oxidase and dehydrogenase components of the preparation.

W.P.R.

#### 248—Journal of Experimental Medicine.

- a. SHOPE, R. E., 1941.—“The swine lungworm as a reservoir and intermediate host for swine influenza virus. I. The presence of swine influenza virus in healthy and susceptible pigs.” 74 (1), 41-47.
- b. SHOPE, R. E., 1941.—“The swine lungworm as a reservoir and intermediate host for swine influenza virus. II. The transmission of swine influenza virus by the swine lungworm.” 74 (1), 49-68.

(248a & b) Shope demonstrates that the pig lungworms *Metastrongylus elongatus* and *Chocrostrongylus pudendotectus* are capable of harbouring swine influenza virus and of transmitting it from animal to animal. The virus can remain dormant in the helminths for 2 years. The virus is present in a benign form and some means of provoking it into activity is required; potential methods are given. He was not able to detect the presence of the virus by direct means in either the larval lungworm, in their annelid intermediate host, or in adult lungworm removed from swine lungs.

P.A.C.

#### 249—Journal of Helminthology.

- a. PETERS, B. G., 1941.—“Dilution egg-counts and the Poisson series.” 19 (3/4), 59-62.
- b. PETERS, B. G. & LEIPER, J. W. G., 1941.—“Single versus multiple doses of phenothiazine in lambs.” 19 (3/4), 63-70.
- c. LEIPER, J. W. G. & PETERS, B. G., 1941.—“The effect of phenothiazine on the weights of worm-free sheep and goats.” 19 (3/4), 71-74.
- d. CLAPHAM, P. A. & PETERS, B. G., 1941.—“The differentiation of *Coenurus* species by hook measurements.” 19 (3/4), 75-84.
- e. CLAPHAM, P. A., 1941.—“An English case of *Coenurus cerebralis* in the human brain.” 19 (3/4), 84-86.
- f. ROGERS, W. P., 1941.—“The metabolism of trichinosed rats during the early phase of the disease.” 19 (3/4), 87-104.
- g. GOODEY, T., 1941.—“On the morphology of *Mermithonema entomophilum* n.g., n. sp., a nematode parasite of the fly, *Sepsis cynipsea* L.” 19 (3/4), 105-114.
- h. GOODEY, T., 1941.—“Observations on a giant race of the stem eelworm, *Anguillulina dispaci*, attacking broad beans, *Vicia Faba* L.” 19 (3/4), 114-122.
- i. GOODEY, T. & BENNETT, S. H., 1941.—“On the occurrence of the chrysanthemum eelworm, *Aphelenchoides ritzema-bosi*, in a tomato fruit.” 19 (3/4), 123-126.

(249a) Dilution-counts of helminth eggs are distributed in accordance with the Poisson series. Peters shows from considerations of the sizes of eggs and of counting-cell that this is



to be expected on theoretical grounds. Mixing a suspension of eggs gives a random (not an even) distribution of the eggs.

B.G.P.

(249b) Using egg-counts and lamb-weights before treatment, immediately after, and 5 weeks after, Peters & Leiper show that there is a marked permanent fall in the egg-count when 40 g. of phenothiazine is given to lambs. The weights suggest a temporary loss of weight, subsequently made good. Worm-counts show high efficacy against *Chabertia*, *Trichostrongylus* and *Haemonchus*. Egg- and worm-counts agree in showing a better effect from a single dose than from the same dose spread over 11 days.

B.G.P.

(249c) Leiper & Peters could not find that phenothiazine had any effect on the weights of worm-free sheep and goats. They conclude that weights can therefore properly form a criterion of anthelmintic efficacy.

B.G.P.

(249d) From a statistical analysis of hook measurements, Clapham & Peters find that hooks of *Multiceps glomeratus* can reach full adult size in the *Coenurus*. Adult *M. serialis* hooks were slightly larger. Blade measurements are the most satisfactory. In most measurements cysts differ among themselves, and so do scolices, but the clusters of scolices within a cyst do not. The standard deviation of any hook measurement is about 5% of the mean.

B.G.P.

(249f) Rogers has studied the changes in protein digestion, crude fibre digestion and the chief urinary constituents of 4 rats after infection with *Trichinella spiralis*. Protein digestion reached its lowest level 8 to 12 days after infection. In the less resistant rats, urinary nitrogen rose immediately after infection. In all rats there followed a decrease in nitrogen output, minimum amounts being excreted about the 10th day, after which it rose steadily to a maximum 6 days later. In general, the excretion of urea, creatine and creatinine followed the urinary nitrogen output. Ammonia excretion followed a course opposite to that of urea. The possible significance of these results is discussed.

W.P.R.

(249g) Goodey describes and illustrates the morphology of *Mermithonema entomophilum* n.g., n. sp., adult males and females of which were found in the body-cavity of a small fly, *Sepsis cynipsea*. In the oesophageal region of both sexes there is found the remains of a stichosome composed of 8 stichocytes. The gonads are paired and outstretched in both male and female whilst the male possesses a single large spicule and carries on each side of the tail a row of 25 to 28 small, sub-ventral, crateriform papillae. In dealing with the systematic position of the new worms the author differentiates them from *Aproctonema entomophagum* Keilin and *Tetradonema plicans* Cobb.

T.G.

(249h) In portions of diseased broad bean stems, originating from Portugal, Goodey found numerous adults of a giant race of the stem eelworm, *Anguillulina dipsaci*, known previously only from diseased broad beans from Algiers. The females had an average length of 1.97 mm. and the males 1.77 mm. Symptoms of disease due to the parasite are given and also an account of infection experiments with broad beans and other leguminous plants. It was found that seedlings only of garden pea, field pea, soy bean and sainfoin could serve as rather unsuitable hosts for the parasite, which, however, maintained their size on these plants. Statistical evidence is adduced for considering the giant forms as a true and distinctive race. It is also shown that a race of the parasite of normal size from oats did not increase in size on transferring to broad beans, which were successfully invaded by it.

T.G.

(249i) Goodey & Bennett record for the first time the chrysanthemum eelworm, *Aphelenchoides ritzema-bosi*, in the diseased tissues of some green tomato fruits. The latter were found to be infected in the calyx region during storage. The plants bearing them had already been pulled up and destroyed when the diseased condition was observed so that the origin of the infestation is unknown. In discussing the practical aspects of this find the risk of infecting tomato plants from eelworm infected chrysanthemum leaves is pointed out.

R.G.

## 250—Journal of Immunology.

- a. MAUSS, E. A., 1941.—"Occurrence of Forssman heterogenetic antigen in the nematode, *Trichinella spiralis*." 42 (1), 71-77.

(250a) Mauss shows that *Trichinella spiralis* contains a specific heterogenic antigen; this is the first record of its presence among the helminths. As man will contain heterophile

antibody in varying degree, consequent upon exposure to organisms containing such antigen, Mauss suggests that individuals may vary in their reaction to infestation with *T. spiralis* and that their cutaneous reactions may show various modifications. P.A.C.

## 251—Journal of the Malaya Branch of the British Medical Association.

- a. EGAN, E., 1941.—“Hookworm ova: simple flotation technique.” 5 (1), p. 55.

(251a) The simple brine-flotation method for hookworm ova, inverting a slide on a shallow flat container, is messy. Egan prefers to use a taller container, 1 in. high  $\times$   $\frac{3}{4}$  in. diameter, and to support a 3 in.  $\times$  1 in. slide so that it just fails to touch the container. A drop of brine hanging from the slide is lowered into contact with the emulsion, left for 15 minutes, lifted, lowered on to a coverslip, and the slide re-inverted. B.G.P.

## 252—Journal of Medicine. Kiev.

- \*a. LOVTSKY, E. A., 1941.—[On the cellular composition of the local inflammatory focus as index of the immunobiological state of the organism; allergic component in the pathogenesis of trichinellosis.] 11, 253-266.

## 253—Journal of Morphology.

- a. LOWRY, O. F., BEAMS, H. W. & KING, R. L., 1941.—“The fibrillae of the uterine cells of *Ascaris equorum* (variety univalens).” 68 (3), 585-592.

(253a) The fibrillae of the uterine cells of *Ascaris equorum* which arise out of the basement membrane and cover the epithelial cells with a basket-like network are believed to serve as supporting structures for these large epithelial cells. R.T.L.

## 254—Journal of Parasitology.

- a. TETLEY, J. H., 1941.—“The differentiation of the eggs of the trichostrongylid species *Nematodirus filicollis* and *N. spathiger*.” 27 (6), 473-480.
- b. TETLEY, J. H., 1941.—“The egg-laying function of a nematode as shown by study of *Nematodirus* eggs in utero.” 27 (6), 481-491.
- c. COURT, W. W. & OLIVIER, L., 1941.—“Early developmental stages of strigeid trematodes in the first intermediate host.” 27 (6), 493-504.
- d. LUCKER, J. T., 1941.—“A redescription of *Contracaecum multipapillatum* (von Drasche, 1882) (Nematoda: Anisakinae).” 27 (6), 505-512.
- e. HAZARD, F. O., 1941.—“The absence of opalinids from the adult green frog, *Rana clamitans*.” 27 (6), 513-516.
- f. FISCHTHAL, J. H. & ALLISON, L. N., 1941.—“*Acolpenteron ureteroecetes* Fischthal and Allison, 1940, a monogenetic trematode from the ureters of the black basses, with a revision of the family Calceostomatidae (Gyrodactyloidea).” 27 (6), 517-524.
- g. FELDMAN, S. I., 1941.—“Studies on the morphology and biology of a psilostome fluke.” 27 (6), 525-533.
- h. OFFUTT, JR., E. P. & MCCOY, O. R., 1941.—“The ‘gopher’, *Citellus richardsonii* (Sabine), as an experimental host for *Trichinella spiralis*.” 27 (6), 535-538.
- i. HOFF, C. C., 1941.—“A case of correlation between infection of snail hosts with *Cryptocotyle lingua* and the habits of gulls.” 27 (6), p. 539.
- j. INGRAM, W. M., 1941.—“The helminth fauna of a raccoon.” 27 (6), 539-540.
- k. HARDCASTLE, A. B., 1941.—“*Paragonimus* in a cat from North Carolina.” 27 (6), p. 541.
- l. FUJITA, T., 1941.—“New names for *Metabronema salvelini* Fujita and *Cystidicola minuta* Fujita.” 27 (6), p. 542.
- m. AMERICAN SOCIETY OF PARASITOLOGISTS, 1941.—“Program and abstracts of the seventeenth Annual Meeting of the American Society of Parasitologists, Dallas, Texas, December 29, 30 and 31, 1941.” 27 (6), Supplement, 44 pp.

(254a) By plotting graphically egg length against width, Tetley can distinguish *Nematodirus filicollis* from *N. spathiger*. Treating them as bivariate Normal distributions he finds that the ranges given by the mean  $\pm$  and  $-2\sigma$  are: for the first, 133-176  $\mu$  by 69-86  $\mu$ ; for the second, 179-210  $\mu$  by 88-107  $\mu$ . Only about 5% of eggs would fall outside the ranges where the distributions overlap. In this genus there is little or no size difference between uterine and faecal eggs. B.G.P.

(254b) Tetley has investigated the dynamics of egg production in *Nematodirus* by studying the degree of segmentation and the numbers of uterine eggs. From these data he argues that



almost all females are laying at any one time and that fluctuations in the values of faecal eggs per female relate to the population as a whole rather than to cessation of laying by a proportion of females present. The data can also be interpreted in terms of relative individual fecundity.

B.G.P.

(254c) The life cycle of strigeids is regarded as a series of three generations in two of which reproduction is by a special type of polyembryony. The first stage ends with the mother sporocyst. The second starts from a few germ cells of the miracidium which produce the germ masses in the mother sporocyst. The third generation begins with germ cells separated from the soma of the daughter sporocyst which become cercarial embryos.

R.T.L.

(254d) *Contracaecum multipapillatum* v. Drasche is redescribed and "*C. multipapillosa*" v. Drasche of Skrjabin 1916, is shown to be a new species for which the name *C. ainterlabium* is proposed.

R.T.L.

(254e) There is an absence of opalinids from *Rana clamitans* when this frog harbours *Diplodiscus temperatus*. The flukes feed upon these ciliates.

R.T.L.

(254g) Feldman describes the redia, cercaria, metacercaria and adult of *Psilostomum reflexae* based on experiments with material from *Stagnicola reflexae*. The adult possesses an oesophagus more than 0.1 mm. long. There is an oral sucker and the ventral sucker is about 0.4 mm. in diameter. No naturally infected hosts have been found but adults were reared in chicks. The miracidium is still unknown.

R.T.L.

(254h) *Citellus richardsonii* is very susceptible to infection with *Trichinella spiralis* and adults survive in the intestine for as long as 13 weeks. The gopher shows no resistance to re-infection.

R.T.L.

(254j) *Physaloptera maxillaris* and *Mesocestoides* sp. were present in the alimentary canal of a racoon *Procyon lotor lotor*. Of the former species the great majority occurred in the stomach but specimens were also found in the small intestine and others below the pyloric sphincter. Sixteen specimens were removed from the postcaval vessel of the circulatory system.

R.T.L.

(254l) As *Metabronema salvelini* is preoccupied it is renamed *M. ishii*. For the same reason *Cystidicola minuta* is renamed *C. chika*.

R.T.L.

(254m) The "Program and Abstracts" of the 17th Annual Meeting of the American Society of Parasitologists contains the following titles of helminthological interest. Abstracts are given except in the cases of (xxxviii) and (xlvii). (i) K. L. Hussey "Development of the excretory system in cercariae of digenetic trematodes"; (ii) E. E. Byrd "The excretory system of *Paragonimus*"; (iii) E. W. Townsend "Preliminary report on *Echinochasmus* sp. (Trematoda), and a comparison of the excretory system of the cercaria with three related species"; (iv) A. McIntosh "The designation of type specimens in describing new species"; (v) W. S. Hunter "Studies on cercariae of the common mud-flat snail, *Cerithidea californica*. I. The pleurolophocercous groups"; (vi) W. W. Cort & L. Olivier "The early developmental stages of *Plagiorchis muris* (Trematoda: Plagiorchiidae) in its first intermediate host"; (vii) M. J. Miller "The life history of *Apophallus brevis* Ransom, 1920"; (viii) A. V. Hunninen & R. M. Cable "The life history of *Podocotyle atomon* (Rudolphi) (Trematoda: Opecoelidae)"; (ix) A. V. Hunninen & R. M. Cable "Studies on the life history of *Lecithaster confusus* Odhner (Trematoda: Hemiuridae)"; (x) R. M. Cable & A. V. Hunninen "Studies on the life history of *Siphodera vinalwardsii* (Linton) (Trematoda: Cryptogonimidae)"; (xi) J. F. Denton "Studies on the life history of a microcoeliid trematode of the genus *Lyperosomum*"; (xii) E. W. Price & W. D. Kinchelov "The occurrence of *Dicrocoelium dendriticum* in the United States"; (xiii) F. G. Meserve "*Phyllodistomum coatneyi* n. sp., a trematode from the urinary bladder of *Ambystoma maculatum* (Shaw)"; (xiv) R. M. Cable & A. V. Hunninen "The systematic position of the genus *Deropristis* Odhner with respect to a proposed revision of the trematode families Acanthocolpidae and Allocreadiidae"; (xv) G. C. Godman & C. H. Willey "Notes on embryonating eggs of *Zygocotyle lunata* and on their preparation for cytological study"; (xvi) R. F. Nigrelli "Parasites of the green turtle, *Chelonia mydas* (L.), with special reference to the rediscovery of trematodes described by Looss from this host species"

- (xvii) G. W. Hunter, III & W. S. Hunter "Studies on host-parasite reactions. V. The integumentary type of strigeid cyst"; (xviii) G. L. Graham "Hatching *Ascaris* eggs in vitro"; (xix) J. S. Andrews "Some clinical aspects of experimental esophagostomiasis in cattle"; (xx) O. W. Olsen "The biology and ecology of the snail, *Stagnicola bulimoides techella* (Hald.), intermediate host of *Fasciola hepatica* Linn., in South Texas"; (xxi) N. R. Stoll & J. H. Tetley "Losses of *Haemonchus* larvae early after their administration to susceptible sheep"; (xxii) D. A. Porter "The effect of milk diet on the development of *Haemonchus contortus* in calves"; (xxiii) R. L. Mayhew "Studies on bovine gastro-intestinal parasites: VII. The effects of a low plane of nutrition (cottonseed hulls) on immunity to the stomach worm (*Haemonchus contortus*)"; (xxiv) E. T. Delaune & R. L. Mayhew "Further data on the blood picture in stomach worm (*Haemonchus contortus*) infections"; (xxv) W. L. Threlkeld & M. E. Henderson "Notes on the musculature of the male genitalia of *Haemonchus contortus*"; (xxvi) L. A. Spindler & K. C. Kates "Effect of a single dose of phenothiazine upon egg production and viability of the eggs of swine lungworms"; (xxvii) P. D. Harwood & J. E. Guthrie "Limited tests of phenothiazine as an anthelmintic in goats"; (xxviii) L. A. Spindler & J. L. Avery "Skin and precipitin tests for the diagnosis of *Trichina* infections in grain-fed and in garbage-fed hogs"; (xxix) J. L. Avery "Reactions in garbage-fed and in grain-fed hogs to intracutaneous injections of various diluents"; (xxx) L. A. Spindler, J. L. Avery & H. E. Zimmerman, jr. "Precipitate formation around *Trichina* larvae in sera from *Trichina*-infected and *Trichina*-free hogs"; (xxxi) K. C. Kates "Experimental infection of pigs with the swine thorn-headed worm, *Macracanthorhynchus hirudinaceus*"; (xxxii) D. A. Porter, L. E. Swanson & T. J. Drake "The duration of infectivity of nematode parasites of cattle on Florida pasture with observations on resistance of calves to natural re-infection with *Haemonchus contortus*"; (xxxiii) W. H. Headlee "Observations on the duration of an infection of *Hymenolepis nana* in man"; (xxxiv) L. O. Nolf & H. Zaiman "The effect of host age on the number of *Trichinella spiralis* recovered from rats during the early period of infection"; (xxxv) E. P. Offutt, jr. "The effects of immune serum upon the larvae of *Trichinella spiralis* in vitro"; (xxxvi) O. R. McCoy & F. F. Bond "Attempted passive transfer to rats and mice of immunity to *Trichinella spiralis*"; (xxxvii) G. F. Otto "Quantitative relationships in immunity to hookworm"; (xxxviii) J. E. Ackert "Natural resistance to helminthic infections"; (xxxix) H. W. Manter "Two unusual trematodes"; (xl) J. D. Webster "Two species of *Porrocaecum* (Nematoda) from the robin"; (xli) A. C. Chandler "The genus *Gnathostoma* in North America"; (xlii) A. C. Todd "Demonstration of a new parasitic nematode from a water scavenger beetle"; (xliii) J. L. Mohr "The host-parasite phylogenetic complex: the criteria and their application to the opalinid-anuran complex"; (xliv) S. Brackett & A. J. Beckmann "The fate of some species of schistosome cercariae in chick embryos"; (xlv) G. W. Hunter, III "Studies on host-parasite reactions. VI. An hypothesis to account for pigmented metacercarial cysts in fish"; (xlvi) H. W. Manter "Observations on the geographical distribution of digenetic trematodes of marine fishes"; (xlvii) H. F. Hsü and S. Y. Li "The frequency of helminths in their naturally infected hosts"; (xlviii) D. V. Moore "Life history and development of *Macracanthorhynchus ingens* and *Mediorhynchus grandis* (Acanthocephala)"; (xlix) A. C. Todd "An addition to the life history of *Leidyneia appendiculatum* (Leidy, 1850) Chitwood, 1932, a nematode parasitic in cockroaches"; (l) W. M. Reid & J. E. Ackert "Removal of chicken tapeworms by host starvation and some effects of such treatment on tapeworm metabolism"; (li) J. T. Culbertson & S. H. Greenfield "Effect of atabrine upon experimental cysticercosis of mice"; (lii) A. E. Woodhead "The life cycle of *Diocotophyma renale*, the giant kidney worm of mammals"; (liii) G. W. Luttermoser "The possibility of chemical control of the snail intermediate hosts of *Schistosoma mansoni* in Venezuela"; (liv) L. L. Eisenbrandt & J. E. Ackert "Effects of duodenal mucus of dogs and swine upon the viability of *Ascaridia lineata* in vitro"; (lv) L. P. Frick & J. E. Ackert "The role of duodenal mucus in age resistance"; (lvi) A. J. Levin & T. C. Evans "Intestinal resistance to a second infection of *Trichinella spiralis*"; (lvii) J. E. Larsh, jr. "Demonstration of naturally acquired, passive immunity to *Hymenolepis nana* var. *fraterna*"; (lviii) L. J. Thomas "Effects of testosterone on nematodes"; (lix) R. F. Nigrelli "Hairworms as parasites of fishes".

A.E.F.



# 255—Journal of Pathology and Bacteriology.

- a. DAVSON, J., 1941.—“Malignant hypertension associated with hydatid disease of the kidney.” 53 (2), 207-212.

# 256—Journal of Pharmacology and Experimental Therapeutics.

- a. CULBERTSON, J. T. & GREENFIELD, S. H., 1941.—“Effect of atabrine upon experimental cysticercosis of mice.” 73 (2), 159-161.

(256a) Atabrine appeared to prevent or retard the development of *Cysticercus fasciolaris* in experimentally infected mice when the treatment was commenced before infection took place. When treatment was withheld until cysticerci had established themselves the effect was not significant.

R.T.L.

# 257—Journal of the Philippine Islands Medical Association.

- a. ESTRADA, J. & GARCIA, E., 1941.—“*Ascaris lumbricoides* in the common bile-duct: report of a case.” 21 (7), 331-336.

# 258—Journal of Tropical Medicine and Hygiene.

- a. CAWSTON, F. G., 1941.—“Modern methods in controlling Bilharzia infection.” 44 (17), 113-114.
- b. CAWSTON, F. G., 1941.—“The problem of Bilharzia control in the Northern Transvaal.” 44 (23), 160-161.

(258a) The opinion is expressed that “complete eradication of a mollusc from any locality is undesirable and, where only a small number are infested with harmful parasites, should not be attempted provided the species is kept well under control and the final hosts properly treated”.

R.T.L.

# 259—Journal of Wildlife Management.

- a. GOBLE, F. C., 1941.—“Tissue changes in white-tailed deer (*Odocoileus virginianus borealis*) accompanying natural infections of lungworms (genera *Protostrongylus* and *Dictyocaulus*).” 5 (2), 141-158.
- b. MORGAN, B. B. & HAMERSTROM, jr., F. N., 1941.—“Notes on the endoparasites of Wisconsin pinnated and sharp-tailed grouse.” 5 (2), 194-198.
- c. NELSON, E. C. & GASHWILER, J. S., 1941.—“Blood parasites of some Maine waterfowl.” 5 (2), 199-205.

(259a) In white-tailed deer Goble has found that *Dictyocaulus viviparus* provokes a local bronchitis and peribronchitis, whereas the eggs and larvae of *Protostrongylus coburni* in the alveoli are responsible for an often extensive interstitial pneumonia, and the migrating 4th stage larvae of the latter species provoke the formation of fibrous nodules in the lungs and lymph nodes. There are 35 microphotographs.

B.G.P.

(259b) An examination of the guts of *Pedioecetes phasianellus campestris* and *Tympanuchus cupido americanus* in Wisconsin has revealed the presence of 9 species of helminths. Both hosts harboured *Seurocyrnea colini*, *Heterakis gallinae*, *Capillaria contorta*, *Ascaridia lineata* and an unnamed species of *Capillaria*. *P. phasianellus* contained *Cheilosporira spinosa* and *Subulura strongylina* while *T. cupido* harboured *Rhabdometra mullicollis* and *Choanotaenia infundibulum*. Some of these are new host records. These records may not always be complete as in some cases not all the gut was available for examination.

P.A.C.

(259c) Microfilariae have been found in the circulating blood of various species of ducks, teal and coot by Nelson & Gashwiler in the State of Maine. There were at least 3 different types of microfilariae but no adult worms were obtained. The nematodes were often found in the blood of birds also carrying blood protozoa.

P.A.C.

# 260—Közlemények az Összehasonlító Élet-és Kórtan Köréből.

- \*a. KOTLÁN, S. & MÓCSY, J. v., 1941.—[Treatment of *Bunostomum* infection in cattle.] 29, p. 256.

(260a) Kotlán & Mócsy have used Distol with success against *Bunostomum* in cattle. One capsule (containing 1 g. filicin) per 20 kg. body weight was administered, but a dose

of more than 10 capsules was divided over 2 consecutive days. Previous fasting is unnecessary. In most cases *Bunostomum* were all eliminated within 2 days. Occasionally a few worms remained, but a further dose got rid of these. [From an abstract in Dtsch. tierärztl. Wschr., 49, p. 419.] A.E.F.

## 261—Lancet.

- a. [PAGET, J.], 1941.—[Paget tells how he discovered *Trichinella*.] Year 1941, 1 (6128), 201-202.
- b. DICKSON, W. E. C. & WILLIS, J. D., 1941.—“Cysticercosis of the brain with epilepsy and papilloedema.” Year 1941, 2 (6163), 415-417.
- c. HUBBLE, D., 1941.—“Toxicity of phenothiazine.” Year 1941, 2 (6168), 600-601.

(261b) Dickson & Willis describe a case with focal epilepsy, grossly raised intracranial pressure and rapidly increasing papilloedema, due to *Cysticercus cellulosae*. The patient had served in the army in India from 1927 to 1933, but had not observed that he harboured an adult tapeworm. R.T.L.

(261c) Hubble treated 8 children infested with threadworm by giving phenothiazine at doses recommended by Manson-Bahr (1940) and found 2 of them developed an anaemia with, in one case, a toxic hepatitis. He then treated a further 20 children, giving 1 g. per 10 lb. body-weight, spread over 3 to 5 days, and one showed marked signs of a toxic hepatitis. He considers that the use of phenothiazine should be restricted “to cases where less dangerous therapies have repeatedly failed”. B.G.P.

## 262—Lederle Veterinary Bulletin.

- a. SWALES, W. E., 1941.—“Veterinary parasitology with special reference to parasitic diseases of sheep.” 10 (1), [Reprint 8 pp.].

(262a) Swales states that, from the point of view of sheep helminths, Canada can be divided into three regions: the Eastern region where *Haemonchus*, *Trichostrongylus*, hookworm and *Oesophagostomum columbianum* are pathogenic; the Mid-Western region where *Haemonchus* is sporadic, *Oesophagostomum* absent, but *Ostertagia* and *Trichostrongylus* constantly present; and the Pacific region which carries a fauna similar to that in Great Britain, including *Fasciola* and *Oesophagostomum venulosum*. Anthelmintic control measures are suggested for each region. B.G.P.

## 263—Magyar Röntgen Közlöny.

- \*a. SCHOLTZ, A., 1941.—[Roentgenologic demonstration of hepatic and pulmonary echinococcosis.] 15, 41-48.

## 264—Medical Journal of Australia.

- a. EARLE, K. V., 1941.—“The use of sulphonamide compounds in filarial complications.” 28th Year, 2 (8), 200-202.

(264a) M & B 693 has a very valuable effect in filarial lymphangitis, lymphadenitis, funiculitis, mastitis and tenosynovitis, but has no influence on the microfilariae. In filarial myositis, which often proceeds to abscess formation, the action of the drug is very uncertain. R.T.L.

## 265—Medicina. Madrid.

- \*a. APARICIO GARRIDO, J., 1941.—“Las anemias parasitarias.” 9, 60-67.
- \*b. GONZÁLEZ RUBIO, L. & GUTIÉRREZ HERNÁNDEZ, H., 1941.—“Un caso de hidatosis pulmonar en el curso de un neumotórax bilateral.” 9, 444-449.

## 266—Medicina. Revista Mexicana.

- a. NETTEL F., R., 1941.—“Onchocercosis. Los nodulos de localizacion dificil (*Onchocerca caecutiens* Brumpt).” 21 (396), 409-413.



## 267—Medizinische Klinik.

- a. HOLLER, G. & KISSLING, O., 1941.—“Über Trichinose. II. Mitteilung. Die Veränderung des Blutbildes bei Trichinose.” 37 (42), 1056-1059.

(267a) Holler & Kissling have examined, over a period of two months, the blood pictures of 12 patients infected with *Trichinella spiralis*. In general, the results agree with those of Bongert [Neue dtsh. Klinik, 1932, 10, 558-589] and Kruchen [Fortschr. Ther., 1940, 16, 309-322]. As a rule injections with Fouadin caused a fall in the eosinophile count and an increase in monocytes. It is stated that these injections also improved the general condition of the patients.

W.P.R.

## 268—Monatsschrift für Ohrenheilkunde und Laryngo-Rhinologie.

- \*a. POLYÁNSZKY, T., 1941.—“Leberegel in der Nasenhöhle.” 75, 105-107.

## 269—Münchener Medizinische Wochenschrift.

- \*a. BAUDET, E. A. R. F., 1941.—“Die Trichinose und ihre Behandlung.” 88, p. 453.  
 \*b. GAASE, A., 1941.—“Die serologische Diagnose der Trichinose mittels der Komplement-bindungs- und Präzipitationsreaktion.” 88, 473-474.  
 \*c. WÖLFFLIN, E., 1941.—“Über *Cysticercus cellulosae* im menschlichen Auge.” 88, p. 1079.  
 \*d. SCHULZ, W., 1941.—“Versuche über den serologischen Nachweis der Trichinose und ihre klinische Bedeutung.” 88, p. 1085.  
 \*e. GAETGENS, W., 1941.—“Beitrag zur Serodiagnose der Zystizerkose.” 88, p. 1235.

(269a) Baudet has found that “Campiol” (containing the effective principle of various *Pyrethrum* spp.), thymol, and the thymol preparation “Carvasept” are of no effect against experimental trichinosis in rats. He concludes that these drugs would be valueless in treating human trichinosis. [From an abstract in Zbl. Bakt., I. Abt. Ref., 140, p. 278.]

A.E.F.

(269b) Gaase has examined sera from 29 patients whose first trichinosis symptoms appeared 2½ to 3 months previously. Complement fixation and precipitin reactions were studied, the test sera being diluted 1 : 2 in the former case and 1 : 3 in the latter. Guinea-pig serum (diluted 1 in 10) was used as complement and the *Trichinella* antigen was that prepared by I.G. Farben-Industrie. All trichinosis patients gave strongly positive results but tests on 23 patients with other diseases were negative. [From an abstract in Zbl. Bakt., I. Abt. Ref., 140, p. 278.]

W.P.R.

(269d) Schulz has carried out tests with *Trichinella* antigen (prepared by I.G. Farben-Industrie) on 30 trichinosis patients, 23 patients suffering from other diseases, and 32 healthy persons. It is concluded that while the intracutaneous test is of great clinical importance, the precipitin test is useless. [From an abstract in Z. Fleisch- u. Milchhyg., 52, p. 35.]

W.P.R.

(269e) Gaetgens points out that an antigen made from aqueous extract of bladder fluid is efficient for the diagnosis of cysticerciasis, using fixation of complement or precipitation as an indicator. When the sera are strongly positive they may also react with an antigen made from hydatid fluid. But the specificity of the infection can be satisfactorily demonstrated by neutralizing the serum with antigen absorbed in kaolin. This reaction does away with the uncertainty due to the antigens reacting with several related species or genera. [From an abstract in Z. Fleisch- u. Milchhyg., 52, p. 68.]

P.A.C.

## 270—Nature. London.

- a. BOYD, A. E. W., 1941.—“Determination of death in the larvae of the potato root eelworm.” 148 (3765), 782-783.

(270a) To distinguish dead from living larvae of the potato root eelworm Boyd adds to 2 c.c. of a suspension of larvae 5 drops of a 1% solution of potassium iodide in which is dissolved 0.025 g. of iodine in 100 c.c. of the solution. Larvae which have taken on a granular appearance at the anterior end which is usually hyaline take up the stain in a few minutes, and are considered dead. Living larvae become motionless but do not stain for several hours. The iodine enters at the mouth and the anterior end first becomes yellow. Larvae do not stain until they have been dead for 24 to 48 hours.

M.T.F.

## 271—New Jersey Agricultural Experiment Station. Plant Disease Notes.

- \*a. ANON, 1941.—“Use of chloropicrin for root knot nematode control.” 18 (11), 41-44.

(271a) For small scale treatments an injection of 2 to 3 c.c. of chloropicrin per square foot to a depth of 4 to 5 inches is recommended. Paper, wet straw, sash, or some other gas-proof covering should then be placed over the whole area. [From an abstract in Exp. Sta. Rec., 85, p. 783.] M.T.F.

## 272—New Zealand Journal of Agriculture.

- a. WHITTEN, L. K., 1941.—“Phenothiazine. A new drug for the control of internal parasites.” 63 (3), 189-190.  
 b. BARNETT, L., 1941.—“Control of hydatids. Country dog owners must assist in checking the disease.” 63 (5), 413-414.  
 c. ANON, 1941.—“Proper housing and feeding of dogs will prevent the spread of hydatids.” 63 (5), 421-422.

## 273—Norsk Veterinaer-Tidsskrift.

- \*a. AASER, C. S., 1941.—[Trichinelliasis in fur-bearing animals.] 53 (6), 198-226.

(273a) Following upon outbreaks of trichinosis in Norway in 1940, systematic examinations of fur-bearing and other animals were carried out in the eastern districts of the country during December 1940 and January to March 1941. The results were as follows (the number of animals examined is followed, in parentheses, by the number found infected): mink 2,063 (218), captive foxes 18,567 (1,395), wild foxes 92 (18), rats 39 (7), cats 11 (2), dogs 52 (nil), pigs 40 (4). Of 286 human cadavers post-mortemed only one was trichinous. [From an abstract in Tierärztl. Rdsch., 53, 583-584.] A.E.F.

## 274—Novi Khirurgicheski Arkhiv.

- \*a. ANTONOV, G. I., 1941.—[A case of echinococcosis of the liver with perforation into the bile duct.] 48, 243-245.

## 275—Ohio State Medical Journal.

- a. SHAFFER, E. R., 1941.—“Public health aspects of trichinosis control.” 37 (9), 862-865.

(275a) Shaffer finds that garbage-fed pigs have *Trichinella* five times as frequently as grain-fed pigs and are the chief source of trichinosis. Legislation should require the cooking of garbage before feeding to swine. As the crop of pigs is consumed annually, any improvement in feeding and marketing should show results in the succeeding year. R.T.L.

## 276—Okayama-Igakkaï-Zasshi.

- \*a. NONOMURA, T., 1941.—“Ein Fall von parasitärer Meningitis, hervorgerufen durch *Distomum pulmonum*, mit besonderer Berücksichtigung des Auftretens der eosinophilen Leukozyten im Liquor cerebrospinalis.” 53, 67-68.

## 277—Parasitology.

- a. REES, G., 1941.—“The musculature and nervous system of the plerocercoid larva of *Dibothriohynchus grossus* (Rud.).” 33 (4), 373-389.  
 b. REES, G. & LLEWELLYN, J., 1941.—“A record of the trematode and cestode parasites of fishes from the Porcupine Bank, Irish Atlantic Slope and Irish Sea.” 33 (4), 390-396.  
 c. LLEWELLYN, J., 1941.—“A description of the anatomy of the monogenetic trematode *Choricoryle chrysophryi* van Beneden & Hesse.” 33 (4), 397-405.  
 d. ROTHSCCHILD, M., 1941.—“Observations on the growth and trematode infections of *Peringia ulvae* (Pennant) 1777 in a pool in the Tamar Saltings, Plymouth.” 33 (4), 406-415.  
 e. LLEWELLYN, J., 1941.—“A revision of the monogenean family Diclidophoridae Fuhrmann, 1928.” 33 (4), 416-430.  
 f. LLEWELLYN, J., 1941.—“The taxonomy of the monogenetic trematode *Plectanocotyle gurnardi* (v. Ben. & Hesse).” 33 (4), 431-432.  
 g. REES, G., 1941.—“The scolex of *Aporhynchus norvegicus* (Olss.).” 33 (4), 433-438.  
 h. ROTHSCCHILD, M., 1941.—“The metacercaria of a pleurolophocerca cercaria parasitizing *Peringia ulvae* (Pennant, 1777).” 33 (4), 439-444.  
 i. DAWES, B., 1941.—“On *Styphlodora elegans* n. sp. and *Styphlodora compactum* n. sp., trematode parasites of *Python reticulatus* in Malaya, with a key to the species of the genus *Styphlodora* Looss, 1899.” 33 (4), 445-458.



(277a) The musculature of the body, scolex and proboscides of the plerocercoid of *Dibothriohynchus grossum* and of the nervous system are described and delineated. The ganglia do not contain nerve cells. The nerve centre is the posterior median commissure. R.T.L.

(277b) The platyhelminth parasites of deep-sea fishes obtained from the West of Ireland and from the Irish Sea are listed. Eighteen species of Monogenea, 3 of Digenea and 20 cestode species were collected from 577 fishes. The scarcity of Digenea is attributed to the absence of suitable molluscan intermediaries. R.T.L.

(277c) *Choricotyle chrysophryi* van Beneden & Hesse has been found in a new host, *Pagellus centrodontus*. Its anatomy is described and allied species reviewed. Choricotylidae is given as a new name for Diclidophoridae Fuhrmann, 1928. R.T.L.

(277d) Samples of *Peringia ulvae* were collected and measured over a period of two years from a pool where growth conditions are at a maximum. Infected snails display gigantism and variation and attain dimensions of 9 to 10 mm. They are probably no older than uninfected specimens measuring 6.75 mm. long. The infection rate is high and shows certain seasonal fluctuations, no doubt linked with the migrations of the wading birds which are the principal final hosts of the trematodes. M.R.

(277e) The 4 genera and 17 species of the Choricotylidae are reviewed. The genus *Pedocotyle* is excluded from the family as defined by the author. R.T.L.

(277f) *Plectanocotyle caudata* Lebour, 1908, is considered to be a synonym of *P. gurnardi* (v. Ben. & Hesse, 1863). R.T.L.

(277g) Rees gives details of the musculature and nervous and excretory systems of the scolex of *Aporhynchus norvegicus*. R.T.L.

(277h) A metacercaria is described from *Gobius ruthensparri* Euphras. experimentally infected with a pleurophocercous cercaria with continuous lateral fin-folds, obtained from *Peringia ulvae* (Pennant). Cysts were fed to laboratory-reared rats, gulls, ducks, chickens and a red shank, but no mature trematodes were obtained. On morphological grounds it is thought possible the adult worm pertains to the subfamily Haplorchinae Looss, 1899. M.R.

(277i) Dawes discusses and provides a key for the 14 species of *Styphlodora*. *S. elegans* n. sp. and *S. compactum* n. sp. are described. R.T.L.

## 278—Peking Natural History Bulletin.

- TANG, C. C., 1941.—"Contribution to the knowledge of the helminth fauna of Fukien. Part I. Avian, reptilian and mammalian trematodes." 15 (4), 299-316.
- TANG, C. C., 1941.—"Morphology and life history of *Prosostephanus industrius* (Tubangui 1922) Lutz 1935 (Trematoda: Cyathocotylidae)." 16 (1), 29-43.
- HU, S. M. K., 1941.—"Studies on the susceptibility of Shanghai mosquitoes to experimental infection with *Microfilaria malayi* Brug. V. *Armigeres obturbans* Walker." 16 (1), 55-65.
- HU, S. M. K., 1941.—"Studies on the susceptibility of Shanghai mosquitoes to experimental infection with *Microfilaria malayi* Brug. VI. *Aedes albopictus* Skuse." 16 (1), 67-70.

(278a) Tang reports on 24 species of trematodes recovered from birds, reptiles and mammals in Fukien Province, China. The new forms described are: *Opisthorchis geminus* var. *falconis* n. var. from *Falco* sp., *Cyathocotyle chungkee* n. sp. from *Pelicanus onocrotalus roseus*, *Astiotrema foochowensis* n. sp. from *Amyda tuberculata*, and *Plagiorchis* (*Multiglandularis*) *linkuoliangi* n. sp. from *Suncus murinus*. Of the known species the following are new records for China: *Cyclocoelum pseudomicrostomum*, *Patagifer parvoispinosus*, *Opisthorchis longissimus*, *Proctobium gedoelsti*, *Centrocestus formosanus*, *Kaurma longicirra*, and *Encyclometra microrchis*. A.E.F.

(278b) Tang shows that the development of *Prosostephanus industrius* follows the course typical for Cyathocotylidae. The molluscan intermediaries are *Parafossarulus eximius* and *P. striatulus* while the metacercariae encyst most frequently in the Crucian carp. Cats which were infected experimentally soon lost their infections. The eggs and succeeding larval stages are described in detail and the reproductive system of the adult is restudied. In a postscript the larval stages are compared with those of *C. orientalis*. R.T.L.

(278c) *Armigeres obturbans*, one of the commonest household mosquitoes in the lower Yangtze region, is shown to have only a slight susceptibility to infection by *Microfilaria malayi*.  
R.T.L.

(278d) *Aedes albopictus* was not susceptible to experimental infection with *Microfilaria malayi*, while in 9 out of 12 *Anopheles hyrcanus* var. *sinensis* infective larvae developed.  
R.T.L.

## 279—Philippine Journal of Science.

- a. JOHRI, L. N., 1941.—“On two new species of the family Hymenolepididae Fuhrmann 1907, (Cestoda) from a Burmese cormorant *Phalacrocorax javanicus* (Horsfield, 1821).” 74 (2), 83-89.
- b. HASSELMANN, C. M., 1941.—“*Paragonimus westermanii*. Case report with microphotograph of operculum of the ovum sprung open.” 74 (3), 285-287.
- c. TUBANGUI, M. A. & PASCO, A. M., 1941.—“Studies on the geographical distribution, incidence and control of Schistosomiasis japonica in the Philippines.” 74 (4), 301-327.
- d. TUBANGUI, M. A. & AGUILA, P. J., 1941.—“The treatment of Schistosomiasis japonica with Fuadin.” 75 (1), 69-73.
- e. TUBANGUI, M. A. & MASILUNGAN, V. A., 1941.—“Trematode parasites of Philippine vertebrates. IX. Flukes from the domestic fowl and other birds.” 75 (2), 131-141.
- f. YUTUC, L. M., 1941.—“Studies on the influence of splenectomy on natural and acquired immunity of rats to *Nippostrongylus muris*.” 75 (3), 255-277.
- g. ACENA, S. P., 1941.—“Preliminary notes on a trematode with two yolk reservoirs and a new species of *Levinseni*.” 75 (3), 285-289.

(279a) Johri describes and figures *Oligorchis burmanensis* n. sp. and *Hymenolepis gyogonka* n. sp. both from *Phalacrocorax javanicus*.  
A.E.F.

(279c) From a survey of the Philippines, Tubangui & Pasco find that Schistosomiasis japonica is restricted by the distribution of the intermediary to the islands of Leyte, Samar, Mindanao and Mindoro, where the incidence varies from 17 to 45%. The disease is of medical and economic importance, and control measures are suggested.  
B.G.P.

(279d) Fouadin was given to 19 patients suffering from *Schistosoma japonicum*. 40 c.c. were administered over 9 intramuscular injections. The first 3 of 1.5 c.c., 3.5 c.c. and 5 c.c. were given at daily intervals, the rest each of 5 c.c. at 2-day intervals. 10 of the cases were cured. Of the 9 remaining, one had a relapse and 2 were very advanced.  
R.T.L.

(279e) Tubangui & Masilungan record the presence of 9 flukes from birds in the Philippines: 4 species have already been described. Of the new species *Prosthogonimus pseudopellucidus* n. sp. from the bursa fabricii of *Gallus gallus* can be distinguished by the small size of the eggs, the equatorial position of the testes and the vitellaria which extend beyond the anterior border of the acetabulum. *Episthnuum gallinum* n. sp., a rare parasite of the bursa fabricii of *Gallus gallus*, is a very small worm, a fact which easily differentiates it from its nearest relative *E. oscari*. *Brachylaemus malayensis* n. sp., a parasite of the cloaca of *Gallus gallus*, can be differentiated by the size of its suckers, anterior extent of the uterus and the small eggs. *Mesostephanus fregatus* n. sp. is a parasite of the small intestine of *Fregata ariel ariel* in Luzon. It is differentiated by the abundant development of the vitellaria, anterior acetabulum and slender cirrus sac. There is a vaginal sphincter. *M. haliasturus* n. sp. from the small intestine of *Haliastur intermedius* in Luzon is expanded anteriorly, the lateral borders of its body being rolled ventrally. It has a long oesophagus and small cirrus sac, adhesive organ and eggs.  
P.A.C.

(279f) Using *Nippostrongylus muris* infestations in rats, Yutuc finds that there is very little evidence to show that splenectomy depresses antibody formation. There was in his experiments a slight increase in resistance as judged by the lower egg output, the smaller size of the infection and the longer life span of splenectomized animals when the operation occurred before immunization. When it occurred after immunization there was a very slight reduction of immunity.  
P.A.C.

(279g) Acena proposes the new generic name *Dideutosaccus* for a fluke obtained from the rectum of a rock cod, *Sebastes elongatus*, in Washington, D.C. The type species is *D. radifistuli* n.g., n. sp. In most respects this new genus agrees closely with other genera of the



family Opecoelidae, but it is easily distinguished by the presence of two yolk reservoirs. He also describes *Lecithochirium medius* n. sp. a hemiurid parasite of the stomach of a red snapper, *Sebastes ruberrimus*, from Washington. This can be differentiated from other species by the size of the eggs and the suckers, and by the form of the seminal vesicle and the prostate.

P.A.C.

## 280—Phytopathology.

- a. SMITH, A. L., 1941.—“The reaction of cotton varieties to fusarium wilt and root-knot nematode.” 31 (12), 1099-1107.

(280a) Smith studied the reactions of several varieties of cotton grown at four places in the Coastal Plains area in soil infected with both root-knot nematode and fusarium wilt organism. The varieties differed considerably in their resistance to root-knot, which resistance was often associated with wilt resistance. It is assumed that resistance to both organisms in the same variety is incidental, as some wilt-resistant varieties show no more root-knot resistance than wilt-susceptible varieties.

M.T.F.

## 281—Plant Disease Reporter.

- a. MacMILLAN, H. G., 1941.—“Some diseases of drug plants and herbs observed in southern California.” 25 (17), 443-445.  
 b. GODFREY, G. H., 1941.—“A plea for the nematode survey.” 25 (18), 453-455.  
 c. EPPS, J. M. & FISTER, L. A., 1941. “Root-knot nematode in parts of West Tennessee.” 25 (20), 510-512.

(281a) MacMillan found the root-knot nematode, *Heterodera marioni*, infesting the roots of deadly nightshade, *Atropa Belladonna*, both in seedling boxes and in the field in Southern California. He suggests that attack by this eelworm may be the precursor of fungal and bacterial infections. Small roots of the foxglove, *Digitalis purpurea*, were also attacked by *H. marioni*.

T.G.

(281b) The Plant Nematode Council of U.S.A. in August 1941 issued a memorandum on the subject of “A Root-Knot Garden Poll” inviting the co-operation of owners of home and farm gardens in the Southern States in making a survey of the extent of root-knot injury to home grown food crops. Godfrey writes strongly supporting this idea and suggests ways in which useful data may be collected.

T.G.

(281c) Epps & Fister report the results of a brief survey, made in August, 1941, of certain areas of West Tennessee for the root-knot eelworm, *Heterodera marioni*.

M.T.F.

## 282—Proceedings. Annual Meeting of the United States Live Stock Sanitary Association.

- a. SWALES, W. E., 1941.—“Phenothiazine and anthelmintic medication, with special reference to parasitic diseases of sheep.” 44th (1940), pp. 130-135.

(282a) In summarizing the Macdonald College work on sheep parasitic diseases in Canada, Swales shows that the important diseases are: (i) haemonchosis, causing anaemia in lambs in summer, (ii) trichostrongylosis, causing a black scour in late autumn, and (iii) nodular oesophagostomiasis in autumn and winter. Haemonchosis yields to copper and nicotine sulphates or to small doses of phenothiazine given just before going on to pasture in spring and again in July. Nodular disease yields to large (48 g.) doses of phenothiazine given in spring. Data on trichostrongylosis are incomplete. Phenothiazine should be given in adequate doses at the right seasons, and parasite control should augment, not replace, good husbandry.

B.G.P.

## 283—Proceedings of the Indian Academy of Sciences. Section B.

- a. BHALERAO, G. D., 1941.—“*Subulura minetti* n. sp. (Nematoda) from an Indian fowl.” 14 (3), 339-340.

(283a) Bhalerao describes and figures *Subulura minetti* n. sp. from an Indian fowl. The new species differs from *S. strongylina* in the number of caudal papillae, and from *S. differens* in the size of spicules, gubernaculum and pre-anal sucker, and in the position of the vulva and the character of the ovijector.

A.E.F.

## 284—Proceedings of the Linnean Society of New South Wales.

- a. JOHNSTON, T. H. & MAWSON, P., 1941.—“Some nematode parasites of Australian birds.” 66 (3/4), 250-256.

(284a) Johnston & Mawson list 17 nematode parasites of 24 Australian hosts of which 4 are not native Australian birds. No less than 11 are described as new, viz., *Acuaria streperina* n. sp., *Porrocaecum streperae* n. sp. and *P. clelandi* n. sp., *Capillaria graucalina* n. sp., *Rictularina spinosa* n.g., n. sp., *Oxyspirura bancrofti* n. sp., *Seuratinema pomatostomi* n. sp. and *S. magnum* n. sp., *Subukura clelandi* n. sp., *Cheilonematodum halcyonis* n.g., n. sp., *Cyrnea dentifera* n. sp. *Syngamus gracilis* Chapin, 1925 is recorded from *Heteropsar albicapillus*. The genus *Cheilonematodum* differs from any known genus of Habronematinae and is defined “Habronematinae ? : Anterior and posterior ends rounded, anterior with two lateral lips each with a median projection; interlabia present; vestibule followed by long narrow oesophagus with two distinct parts”. The genus *Rictularina* differs in the arrangement of the hooks from known genera of Rictulariinae: “Cuticle strongly annulated; each ring with numerous hooks arranged in longitudinal rows, continuous over whole of body”. R.T.L.

## 285—Proceedings of the Oklahoma Academy of Science.

- a. CROZIER, B. & SELF, J. T., 1941.—“A new host record of the trematode *Neoreniker serpentis*.” 21, p. 31.  
 b. KUNTZ, R. E., 1941.—“The metazoan parasites of some Oklahoma Anura.” [Abstract.] 21, 33-34.  
 c. HUGHES, R. C., HIGGINBOTHAM, J. W. & CLARY, J. W., 1941.—“The trematodes of reptiles, Part II. Host catalogue.” 21, 35-43.

(285a) *Neoreniker serpentis* Schmidt & Hubbard, 1940, is recorded for the first time from the adder, *Heterodon contortrix*. A.E.F.

(285b) Kuntz lists the parasites found in 226 anurans collected in Comanche County, Oklahoma, during the summer of 1939. There were 9 species of trematodes, 3 of cestodes and 13 of nematodes. A.E.F.

## 286—Proceedings of the Royal Society of Queensland.

- a. ROBERTS, F. H. S., 1941.—“Variations in the vulval linguiform process of *Haemonchus contortus*.” 53 (5), 97-100.

(286a) The tongue-like flap which covers the vulva in *Haemonchus contortus* in sheep is reduced to a small knob in the majority of the specimens obtained from cattle. This may be attributed either to an evolution of *H. contortus* into two species or to some physiological difference between the two hosts. R.T.L.

## 287—Public Health. London.

- a. ANON, 1941.—“Trichiniasis in man.” [Editorial.] 54 (11), 201-202.

## 288—Public Health Reports. Washington.

- a. KERR, K. B., JACOBS, L. & CUVILLIER, E., 1941.—“Studies on trichinosis. XIII. The incidence of human infection with trichinae as indicated by post-mortem examination of 3,000 diaphragms from Washington, D.C., and 5 eastern seaboard cities.” 56 (16), 836-855.  
 b. OLSON, B. J., WRIGHT, W. H. & NOLAN, M. O., 1941.—“An epidemiological study of calcified pulmonary lesions in an Ohio county.” 56 (44), 2105-2126.

(288a) 3,000 diaphragms were examined; the results of the first 1,000 have already been reported but are included. 15.5% of 2,330 from hospitals in Washington, D.C., were found to contain *Trichinella* cysts, as were 18.8% of the remaining 670 which came from 5 service hospitals in other eastern cities. The method of direct microscopical examination was almost 90% effective in infections in which the larvae were dead. The digestion method detected all but one where the larvae were alive. Of the 488 positives, 220 contained dead larvae only, 175 had living larvae only, and in 89 the larvae were both living and dead. The



majority of the infections were light, but in 1.6% the patients had obviously suffered from clinical trichinosis at some period.

R.T.L.

(288b) The authors have been unable to implicate *Ascaris* larvae in the causation of the pulmonary calcification which is of very common occurrence in Ross County, Ohio, and could not be related to tuberculosis.

R.T.L.

### 289—Puerto Rico Health Bulletin.

- \*a. ANON, 1941.—“Texto de la nueva película sobre uncinariasis del departamento de sanidad.” 5, 206-209.

### 290—Puerto Rico Journal of Public Health and Tropical Medicine.

- \*a. KOPPISCH, E., 1941.—“Studies on Schistosomiasis mansoni in Puerto Rico. The morbid anatomy of the disease as found in Puerto Ricans.” 16, 395-455.  
 \*b. HOFFMAN, W. A. & JANER, J. L., 1941.—“*Bufo marinus* as a vector of helminth ova in Puerto Rico.” 16 (3), 501-504. [Also in Spanish pp. 505-509.]

### 291—Quarterly Bulletin of Sea View Hospital.

- a. ROBITZEK, E. H., 1941.—“Pelvic schistosomiasis (mansoni) associated with tuberculosis. Case report.” 6 (4), 426-432.

### 292—Quarterly Review of Biology.

- a. VAN CLEAVE, H. J., 1941.—“Hook patterns on the acanthocephalan proboscis.” 16 (2), 157-172.

(292a) Van Cleave discusses the arrangement and form of hooks on the acanthocephalan proboscis. The most generalized type exhibits a radial symmetry, with quincuncial arrangement of hooks, showing little intraspecific variation. Other types show great variations of pattern in some of which longitudinal rows cannot be distinguished; here, transverse rows (circles) make a simpler concept than the complex bifurcating spirals proposed by Meyer. The genetic implications of hook patterns are considered throughout.

B.G.P.

### 293—Records of the Australian Museum.

- a. JOHNSTON, T. H. & MAWSON, P. M., 1941.—“Some parasitic nematodes in the collection of the Australian Museum.” 21 (1), 9-16.

(293a) In a small collection of 15 unnamed parasitic nematodes belonging to the Australian Museum and collected chiefly from reptiles, birds and rodents in South Australia, the following are described as new, viz.: *Denticulospirura dentata* n.g., n. sp., *Acuaria corvicola* n. sp., *Oxyspirura streperae* n. sp., *Physaloptera banfieldi* n. sp., *P. troungtoni* n. sp., *Hamato-spiculum mcneilli* n. sp., *H. halcyonis* n. sp., *H. chibiae* n. sp., *Spirochoura elseyae* n. sp., *Contractaecum nyticoracis* n. sp. The new genus *Denticulospirura*, which is based on a single young female, is said to have distinctive head characters. The head is rounded, there are no lips and the mouth leads into a cylindrical vestibule with six triangular teeth at the base.

R.T.L.

### 294—Records of the Indian Museum.

- a. PODDER, T. N., 1941.—“On a new Acanthocephala, *Acanthosentis sircari* sp. nov., from a Calcutta fish, *Rasbora elonga* (Ham.)” 43 (2), 137-142.  
 b. AKHTAR, S. A., 1941.—“A new genus and species of nematodes parasitic in a ‘Pika’ from Afghanistan.” 43 (2), 217-219.  
 c. SUBRAMANIAN, M. K., 1941.—“Studies on cestode parasites of fishes. II. The nervous system of *Tylocephalum dierama* Shipley and Hornell.” 43 (3), 269-280.

(294b) Akhtar describes and figures *Labiostrum naimi* n.g., n. sp. from a rodent, *Ochotona* sp. The new genus appears to be between *Dermatoxys* and *Protozoophaga*, but differs from both in the structure of the mouth, and in the absence of cervical alae, valvular apparatus, and the wide oesophageal cavity.

A.E.F.

### 295—Revista Argentina de Urología.

- \*a. PEREDA, J. J. & DIETSCH, J. R., 1941.—“Contribución al estudio de los quistes hidáticos pararenales. Presentación de dos casos.” 10, 245-255.

## 296—Revista Brasileira de Biologia.

- a. FREITAS, J. F. TEIXEIRA DE, 1941.—“Novo trematódio parasito de peixe do Rio Miranda.” 1 (3), 249-251.  
 b. FREITAS, J. F. TEIXEIRA DE & LENT, H., 1941.—“Sobre um novo parasito de aranha: *Cloeoscaris longispiculum* n. sp. (Nematoda, Ascaroidea).” 1 (3), 267-270.

(296a) *Creptotrema dispar* n. sp., differing from *C. dissimilis* chiefly in the disposition of the yolk glands, is described from the fresh-water fish *Chalcinus paranensis*. R.T.L.

(296b) *Cloeoscaris longispiculum* n. sp. is described from *Pteronura brasiliensis* at Salobra, Brazil. It is differentiated from *C. spinicollis*. R.T.L.

## 297—Revista Chilena de Higiene y Medicina Preventiva.

- a. WILHELM, O., 1941.—“Contribución al estudio de la hidatidosis en Chile. La equinococosis en Concepción.” 3 (4), 281-289.

## 298—Revista de Chirurgie si Bulletins et Mémoires de la Société de Chirurgie de Bucarest.

- \*a. POPESCO, S., 1941.—“Kyste hydatique du poumon; operation en un temps.” 44, p. 244.

## 299—Revista Clínica Española.

- a. CALVO MELENDRO, J., 1941.—“Equinococosis peritoneal múltiple.” 2 (4), 359-363.

## 300—Revista Clinica de São Paulo.

- \*a. ALMEIDA CHRISTOVÃO, D. DE, 1941.—“Do valor do método do ‘swab’ NIH no diagnóstico da enterobiose intestinal e da incidência desta em crianças de São Paulo.” 9, 148-160.

## 301—Revista de Medicina Tropical y Parasitología, Bacteriología, Clínica y Laboratorio.

- a. PÉREZ VIGUERAS, I., 1941.—“Nota sobre el genero *Histiostrongylus* Molin 1861.” 7 (4), 67-72.  
 b. THOMAS, L. J., 1941.—“The life cycle of *Ophiotaenia perspicua* La Rue, a cestode of snakes.” 7 (4), 74-78.

(301a) Pérez Vigueras has examined some specimens of the genus *Histiostrongylus* and is able to add certain characters to the description. The mouth is circular, not triangular as suggested by Molin, there are 3 teeth in the buccal cavity, the bursa contains an antero-lateral ray, the spicules are longer than Molin described and there are 4 caudal spines. In the light of these facts he considers that *H. octacanthus* [see Helm. Abs., Vol. IX, No. 395a] should be removed from this genus and he suggests *Parahistiostrongylus* n.g. for its reception. Considering the systematic position of *Histiostrongylus* Pérez Vigueras follows Travassos, 1935, in removing it from the Trichostrongylinae and admitting it with *Spiniostrongylus* to a new subfamily Spiniostrongylinae [see Helm. Abs., Vol. IV, No. 476b]. P.A.C.

(301b) Thomas shows that *Ophiotaenia perspicua*, a parasite of the water snake *Natrix rhombifer* in Texas, needs two intermediate hosts to complete its life-history. Onchospheres develop to the proceroid stage in a copepod in about 14 days and the plerocercoid develops after ingestion by a tadpole. It is not affected by the metamorphosis of the tadpole to a frog. *Umbra limi*, the mud minnow, may also act as second intermediate host and the definitive host becomes infected by eating tadpole, frog or minnow. All the stages are described. P.A.C.

## 302—Revista Médico-Quirúrgica de Oriente.

- a. HIRZEL PASTRANA, L. F., 1941.—“El Caribe. Cómo extirparlo.” 2 (3), 153-154.

(302a) “El Caribe” is the popular Cuban name for cercarial dermatitis. Discussing its cause locally, Hirzel Pastrana suggests that some schistosome of a migratory bird would explain the brief seasonal occurrence. Against snails he recommends  $\text{CuCO}_3$ , as being less toxic to fish than  $\text{CuSO}_4$  in waters of pH above 7, at the rate of 1 to 2 parts per million; against cercariae, formalin applied at dawn to the water surface; and against the skin irritation, salol in alcohol. B.G.P.



**303—Revista de la Policlínica Caracas.**

- \*a. ESPIN, J., 1941.—“La sustancia metaplasmiática en los nódulos producidos por *Schistosoma mansoni*,” 10, 73-90.
- b. ESPIN, J., 1941.—“Mielitis producida por huevos de *Schistosoma mansoni*,” 10 (59), 245-259.

(303b) The first case of myelitis in Venezuela due to the eggs of *Schistosoma mansoni* is reported. Numerous eggs were found in the dorso-lumbar segment. There were no lesions in the liver.

R.T.L.

**304—Revue Médicale Française d'Extrême-Orient.**

- a. MASSIAS, C., 1941.—“Péricardites purulentes fétides et putrides : difficultés de leur diagnostic. I. Péricardite fétide avec abcès sous-phrénique gauche, ascariodose intrahépatique sans abcès du foie et lithiase intracanaliculaire. II. Péricardite putride consécutive à une gangrène perforante de l'oesophage,” 19 (1/2), 23-30.

**305—Rhodesia Agricultural Journal.**

- a. JACK, R. W., 1941.—“Cultural measures for control of root-knot eelworm with special reference to tobacco,” 38 (10), 546-559.

(305a) This is a general account of the bionomics of *Heterodera marioni*, with recommendations for its control (in Southern Rhodesia) by dry fallowing and the growing of immune crops.

M.T.F.

**306—São Paulo Médico.**

- \*a. FOSSATI, A., 1941.—“Quistes hidáticos personal y breve comentario,” Anno 14, 1, 279-284.

**307—Semana Médica.**

- a. BRINCKMANN, J., 1941.—“Cólicos biliares originados por Fasciola hepática,” Año 48, 1 (3), 159-161.
- b. BACIGALUPO, J., 1941.—“El método del ‘hisopo’ en el diagnóstico de la oxiuriasis. Resultado de los exámenes parasitológicos realizados en los niños del Jardín de Infancia Mitre en el año 1940,” Año 48, 2 (32), 309-313.
- c. SPANGENBERG, J. J., BELGRANO, C. R. & ZUNINO, E., 1941.—“Ascitis biliar. Coleperitoneo hidatídico,” Año 48, 2 (33), 391-398.
- d. GAMBIRASSI, A. C., 1941.—“Tres casos de quiste hidáticos pulmonares en hermanas,” Año 48, 2 (33), 420-421.

**308—South African Medical Journal.**

- a. BRANDT, F. A., 1941.—“The differential staining of the hooklets of tapeworms,” 15 (14), 277-278.
- b. CAWSTON, F. G., 1941.—“The modern treatment of bilharzia disease,” 15 (17), 337-338.

(308a) For the examination of scolices of hydatid, Brandt recommends two techniques which give perfect differentiation between the hooks and the surrounding tissues. In the first method the tissues are stained with methylene blue and the hooks with hot basic fuchsin. The second method involves staining the tissues with neutral red and the hooks with methyl violet. The resulting preparations are relatively “fast” to acid and to alcohol.

P.A.C.

**309—Southern Medical Journal.**

- a. NEAL, M. P., 1941.—“Fat necrosis studies, IV : observations on peanut fattened hogs,” 34 (2), 153-159.
- b. McMULLEN, D. B. & GRAY, J. K., 1941.—“The incidence of intestinal parasites in fecal samples collected in eastern Oklahoma,” 34 (2), 177-181.

(309a) Pancreatic fat necrosis in pigs is attributed to the presence of *Stephanurus dentatus*.

R.T.L.

(309b) McMullen & Gray, from an examination of 924 specimens of faeces obtained in eastern Oklahoma, give the rural-urban, sex, racial and age distributions of protozoa and helminths.

R.T.L.

## 310—Sovetskaya Meditsina.

- a. KAZAKOV, P. T., 1941.—[Two cases of penetration of *Ascaris* into the abdominal cavity.] 5 (2), p. 35. [In Russian.]
- b. PEREVODCHIKOVA, L. N. & SHIPILIN, A. S., 1941.—[*Diphyllobothrium anaemia*.] 5 (3), 26-27. [In Russian.]
- c. VASILKOVA, Z. G., 1941.—[The rôle of rural medical centres in the campaign against helminthiasis.] 5 (7), 35-36. [In Russian.]

## 311—Sovetskaya Psikhonevrologiya.

- \*a. EBICH, E. M., 1941.—[Echinococcosis of the spine and spinal cord.] 17 (1), 51-59.

## 312—Special Pamphlet. Dominion Department of Agriculture. Canada.

- a. SWALES, W. E., 1941.—“Control of certain parasitic worms in sheep. The prevention and control of nodular disease and parasites of the stomach and intestines of sheep by phenothiazine compound tablet.” No. 51, 4 pp.

(312a) This “War-time Production” pamphlet of the Canadian Agricultural Supplies Board recommends 12.5 g. tablets of phenothiazine, combined with “certain other chemicals”, against *Oesophagostomum*, stomach worms, and *Trichostrongylus* in sheep. It is recommended to give all sheep 3 or 4 tablets in winter or early spring, and sheep affected by black scour 2 or 3 tablets in autumn. One or 2 tablets can be given in summer for stomach worms. [An enclosed slip gives the price as \$4.75 per 100 tablets.] B.G.P.

## 313—Taiwan Igakkai Zassi.

- a. YOSINO, T. & NAKASATO, T., 1941.—“On the distribution and the degree of infection of *Wuchereria bancrofti* in Yaeyama Islands, Okinawa Prefecture.” 40 (4), 749-761. [In Japanese : English summary p. 761.]
- b. KOBAYASI, H., 1941.—“On the development of *Microfilaria bancrofti* in the body of the mosquito (*Culex fatigans*).” 40 (5), 891-913. [In Japanese : English summary pp. 911-913.]
- c. OHAMA, S., 1941.—“On the examination of *Microfilaria bancrofti* in day blood.” 40 (5), 941-945. [In Japanese : English summary p. 945.]

(313b) The development of *Microfilaria bancrofti* in *Culex fatigans* can be divided into an embryonal and 3 larval stages separated by 2 moults. The embryo loses its sheath in 2 to 6 hours after entering the mosquito's stomach and enters the body cavity in 4 to 17 hours after infection. At 22.8° C. to 32° C. development is completed in 12 to 14 days after infection. Kobayasi finds that the anterior part of the oesophagus is developed from the large spindle-shaped primordial cells anterior to the nerve ring, the posterior portion from the primordial cells in the middle of the larva, and the mid-intestine from the cell situated immediately posterior to those from which the posterior oesophagus forms. The cytoplasm of the G-cells gives rise to the rectum. The genital anlage develops from 2 cells on the ventral aspect of the middle of the larva and has no relation with the G-cell. Two large oval cells with numerous granules which are found on the ventral aspect of the mid-intestine at the end of the 1st larval stage represent gland cells. The remaining cells in the nuclear column form the muscular layer of the body wall and the sphincters of the mid-intestine. R.T.L.

## 314—Technical Bulletin. Virginia Agricultural Experiment Station.

- a. THRELKELD, W. L., 1941.—“Helminth parasites in sheep.” No. 68, 46 pp.

(314a) Threlkeld reports *Strongyloides* in lambs 5 weeks old removed from their ewes at birth. Larvae of *Ostertagia circumcincta* survive better in loam than in clay or sand and remain infective for 5 to 11 months, and even after field temperatures of -10° F. Eggs of this species are usually most numerous after wet weather, but immunity may greatly reduce the rate of egg-laying. Against this and other nematodes numerous anthelmintics have been tested, and rate and season of dosing are discussed; 4 doses of phenothiazine at 6 g. per lb. are recommended, in August, September, end of November, and January. B.G.P.

## 315—Tierärztliche Rundschau.

- a. BETZ, W., 1941.—“Seuchenhafte Trematodenerkrankungen bei Gänsen.” 47 (44), 526-527.



(315a) Betz describes an epidemic among geese associated with *Echinoparyphium recurvatum*. He describes the worm and the changes produced by its presence in the host tissue. *Amidostomum anseris* was present in the stomach. P.A.C.

### 316—Transactions of the American Microscopical Society.

- a. LUNDAHL, W. S., 1941.—"Life history of *Caecincola parvulus* Marshall and Gilbert (Cryptogonimidae, Trematoda) and the development of its excretory system." 60 (4), 461-484.
- b. STUNKARD, H. W., WILLEY, C. H. & RABINOWITZ, Y., 1941.—"*Cercaria burti* Miller, 1923, a larval stage of *Apatemon gracilis* (Rudolphi, 1819) Szidat, 1928." 60 (4), 485-497.
- c. HUNTER, III, G. W. & HAMILTON, J. M., 1941.—"Studies on host-parasite reactions to larval parasites. IV. The cyst of *Uvulifer ambloplitis* (Hughes)." 60 (4), 498-507.

(316a) The various stages of the life-history of the cryptogonimid *Caecincola parvulus* are described in detail from experimental material. The first intermediary is *Amnicola (Marstonia) lustrica* which has a life span of one year. The miracidia hatch after ingestion. The cercariae are pleurolophocercous and penetrate the fins and the skin of cyprinid and centrarchid fishes. The excretory system is branching, with 16 flame cells. The short caudal tube formed by the union of the primary collecting tubes in the tail disappears and the new excretory pore is located in the constriction between body and tail. The number and position of the excretory tubes and flame cells remains unchanged in the metacercaria, which is infective after three weeks development. R.T.L.

(316b) Specimens of *Tetracotyle burti* from a leech when fed to a duck produced mature worms and eggs which closely resembled *Apatemon gracilis*. The ducks lost their infection in 13 days. The larvae are not infective immediately after encystment but require 32 to 42 days for development and metamorphosis. *Cercaria pseudoburti* is considered a synonym of *C. burti*. R.T.L.

(316c) The cysts of the strigeid *Uvulifer ambloplitis* lodge in the muscles of certain fishes. The inner hyalin cyst forms within 2 to 4 days and the stages of cyst formation parallel similar inflammatory or local immune reactions in higher forms. Pigment-bearing cells appear in the outer layers of the fibroblast portion of the cyst during the third week. R.T.L.

### 317—Transactions of the Royal Society of Canada. Section V. Biological Sciences.

- a. WARDLE, R. A. & GREEN, N. K., 1941.—"Tapeworm anemia: the influence of tapeworm fatty acid ingestion upon the host blood picture." Ser. 3, 35, 85-97.

(317a) Wardle & Green found that the blood picture of dogs and humans infected with *Diphyllbothrium latum* was one of increased blood destruction. Red cell counts fell very gradually and were subject to remissions. Mean cell volumes were above normal though there was a decrease in cell diameter. Mean cell haemoglobin and mean cell haemoglobin concentration values were fairly stable. Eosinophilia reached a peak early in the infection and then declined. Somewhat similar blood pictures were obtained by feeding fatty acids isolated from *Moniezia expansa* to rabbits in quantities equivalent to the amounts liberated by the disintegration of 100 g. of tapeworm per week. Tapeworm unsaturated fatty acids caused more marked changes than tapeworm saturated or hydroxy fatty acids (both contaminated with the unsaturated fatty acids). Animals fed with stearic or ricinoleic acids showed a decrease in average red cell diameter only, but oleic acid caused a decline in the count as well. It is concluded that the results obtained support the Faust-Tallqvist hypothesis that blood destruction in tapeworm infected animals is correlated with the liberation of unsaturated fatty acids by the parasites. W.P.R.

### 318—Transactions of the Royal Society of South Australia.

- a. JOHNSTON, T. H. & MAWSON, P. M., 1941.—"Some nematodes from Australian birds of prey." 65 (1), 30-35.
- b. JOHNSTON, T. H. & MAWSON, P. M., 1941.—"Ascaroid nematodes from Australian birds." 65 (1), 110-115.
- c. JOHNSTON, T. H. & ANGEL, L. M., 1941.—"Life cycle of the trematode, *Diplostomum murrayense* J. & C." 65 (1), 140-144.

(318a) Johnston & Mawson describe 11 species of nematodes from 14 Australian birds of prey, including 2 new genera and 6 new species: *Porrocaccum circinum* n. sp., *Physaloptera*

*hieracidae* n. sp., *Acuaria flindersi* n. sp., *Habronema paraleptoptera* n. sp., *Seuratinema brevicaudatum* n.g., n. sp. (*Seuratinema*: differing from *Seuratia* in the characters of head, oesophagus and male tail) and *Bancroftinema dentatum* n.g., n. sp. (which is between *Physalopteridae* and *Spiruridae*, and differs from *Seuratinema* in the presence of lips and an armed stoma). Short redescrptions are given for *Thelazia aquilina*, *Serratospiculum guttatum*, *Hamatospiculum mcneilli* and also for *Subulura* sp. and *Hamatospiculum* sp. N.G.S.

(318b) In dealing with the species of *Contraecum* from Australian birds Johnston & Mawson stress the importance of proportional measurements which would facilitate the definition of the numerous species of this genus. Specific criteria should include: shape and relative lengths of lips and interlabia, width of head relative to body, and the ratio of oesophagus and diverticula of the gut to the body length; the ratio of the spicules to body length and the position of the vulva and the arrangement of the male papillae. The last two features are the same in a number of species and are therefore insufficient alone. The type species *C. spiculigerum* is redefined in these terms. On re-examination, some specimens previously assigned to it are now referred to *C. bancrofti* n. sp. and to *C. sinulabiatum* n. sp. *C. clelandi* n. sp. and *C. magnicollare* n. sp. are also added. *C. microcephalum* (Rud.) and *C. tricuspe* (Ged.) are redescribed in addition to certain unidentified adults and larvae from several species of birds. Short redescrptions and hosts are given for *Porrocaecum reticulatum*, *Heterakis chenonettae* and *H. isolonche*. N.G.S.

(318c) Johnston & Angel give experimental proof of the life-cycle of *Diplostomum murrayense*, and further observations have been made on naturally infected primary and secondary hosts. *Cercaria murrayensis* has a mean infection rate of 10% in *Limnaea lissoni* and the metacercaria has been found in the lens of some 15 fresh-water fishes. The definitive host is the marsh tern (*Chlidonia leucopareia*). Snails are infected in early spring either by eggs wintering in the swamps or from the faeces of early arriving terns and cercariae emerge in 36 days; diplostomula appear in the lenses of fresh-water fish at a maximum of 4 weeks after being infected. They are not found during the winter months (when cercariae are also absent from snails); large fish have only light infections owing to their inhabiting deeper water which is unfavourable for the food plants of the snails. The structure and life-history of species of this genus from North America are similar. N.G.S.

### 319—Transactions of the Royal Society of Tropical Medicine and Hygiene.

a. LOW, G. C., 1941.—"The nomenclature of the Pacific filaria." 35 (3), 197-198.

(319a) Low does not consider that Manson-Bahr [see Helm. Abs., Vol. X, No. 98a] has any zoological justification at the present time in naming the filaria of the Pacific Islands *Wuchereria pacifica*. R.T.L.

### 320—University of Santo Tomas Journal of Medicine. Manila.

\*a. NAVARRO, M. D., 1941.—"Hepatitis due to ascariasis. Report of a case." 1, 314-317.

### 321—Veterinär-Medizinische Nachrichten. Behringwerke.

\*a. WAGNER, O., 1941.—"Enzootisches Sterben in einem Taubenschlag, verursacht durch den Taubenspulwurm (*Ascaridia columbae*)." 1941 (1), 1-10.

(321a) Wagner has described an epidemic among pigeons caused by heavy infections of *Ascaridia columbae*. Young birds died almost daily. Ascariidol, in doses of 30 mg. per animal, was an effective vermifuge, repeated after 8 to 14 days if faecal examinations showed it to be necessary. He recommends the usual methods for the prevention of infection and points out that the domestic fowl is not a carrier of this species but only of *A. galli* which does not develop in the pigeon. [From an abstract in Tierärztl. Rdsch., 48, p. 52.] P.A.C.

### 322—Veterinarski Arhiv.

\*a. WERTHEIM, P., 1941.—"*Galba truncatula* in Zagrebs Umgebung." 11 (3), 121-138. [In Croatian: German summary.]

(322a) Wertheim discusses ecologically the habitats of *Limnaea truncatula* in the marshy plain of the river Save. Snails can crawl on the underside of a stream's surface and so be transported passively, and may be protected from desiccation by foliage or algal mats. [From an abstract in Berl. u. Münch. tierärztl. Wschr., 1941, p. 546.] B.G.P.



## 323—Veterinary Medicine.

- a. EDER, N. J., 1941.—“A new treatment for internal parasites of sheep.” 36 (5), p. 272.
- b. DURANT, A. J. & KNIGHT, D. R., 1941.—“*Tetrameres americana* (Cram 1927) found in eastern cardinal in Missouri.” 36 (7), 373-374.
- c. MERIWEATHER, B., 1941.—“Phenothiazine vs. hemoglobin in chickens.” 36 (7), 374-375.
- d. FOLSE, C. D., 1941.—“Phenothiazine poisoning.” 36 (8), 430-431.
- e. SHORB, D. A., HABERMANN, R. T. & HEEMSTRA, L. C., 1941.—“Comparison of the efficacy of phenothiazine and copper sulphate-nicotine sulphate mixture as anthelmintics for sheep.” 36 (10), 502-506.
- f. EMMERSON, J. H., 1941.—“Whipworm hysteria in dogs.” 36 (10), 522-523.
- g. ROBINSON, V. B. & KAYS, J. M., 1941.—“Experiments with phenothiazine in the treatment of horses for strongyles.” 36 (11), 557-559.

(323a) Eder has treated two flocks of sheep with capsules containing 3 c.c. n-butyl chloride and  $\frac{1}{4}$  grain phenolphthalein. One flock of 17 was heavily parasitized with *Haemonchus* and *Oesophagostomum* and the second, of 22, with *Haemonchus*. Results were said to be good, there were no toxic symptoms, and the drug is recommended as possibly more satisfactory than phenothiazine. B.G.P.

(323c) In chickens given the normal dose of commercial phenothiazine, viz., 0.5 to 5 g., there is an evanescent fall in the haemoglobin which amounts to apparently 2 g. per 100 c.c. of blood. The decrease which was greatest 48 hours after administration was evanescent and of no consequence. R.T.L.

(323d) Quoting reports of phenothiazine poisoning in horses by Christian (7 cases with 2 fatal), Woolsey (23 cases with several fatal) and the published reports of Hatcher and of Errington, both in 1941, Folse makes the suggestion that sugar in the diet may be an aggravating factor. He also suggests smaller doses than are now customary, combined with a purgative. Anaemia is a contra-indication but the toxic anaemia yields to transfusion. B.G.P.

(323e) Shorb & his co-workers tested the standard dose of copper and nicotine sulphates in 85 ewe lambs, and 25 g. of phenothiazine in 30 ram lambs of the same flock, assessing efficacy by egg counts, on 10 from each group, made by direct centrifugal flotation at weekly intervals. After 6 weeks the treatments were repeated. The egg-counts showed that phenothiazine was more effective, and against more species, [in males] than copper and nicotine sulphates [in females]. It appears that all the nematode genera were differentiated from their eggs. B.G.P.

(323f) By injecting an enema of equal parts of Ributyl (n-butyl chloride) and heavy paraffin, at 1 ounce per 15 lb. live weight, Emmerson claims to rid dogs of both whipworm infestation and the “barking hysteria” which these worms appear to cause in dogs up to 2 years old. He uses an enema hose long enough to reach the caecal region. B.G.P.

(323g) Robinson & Kays report good results against horse strongyles after giving from 20 g. to 50 g. phenothiazine, in the feed or in capsules, to a mixed group of 29 horses; 4 others were given chenopodium. Results were judged from egg-counts (based on the flotation method but counting 10 random microscopic fields) made before treatment and at 1, 3 and 5 weeks after. Eggs began to reappear at the last count. B.G.P.

## 324—Wiener Klinische Wochenschrift.

- \*a. RUCKENSTEINER, E., 1941.—“Die Röntgenzeichen des Nierenechinococcus.” 54, 372-374.

## 325—Zeitschrift für Fleisch- und Milchhygiene.

- a. KOLBE, F., 1941.—“Neueres über die Trichine VI. Übersichtsbericht.” 51 (21), 277-279; (23), 305-308.
- b. LÜHRS, 1941.—“Die Ausprüfung von sogenannten Fresslustanregern. II. Teil: Einwirkung des Arcanum Hella auf den Wurmbefall der Schweine.” 52 (2), 18-20.
- c. RUBERT, B., 1941.—“Gehäufte Befall mit *Echinococcus polymorphus* bei Kuban-Schafen.” 52 (5), p. 58.

(325b) Lührs has tested the effect of “Arcanum Hella” (a supplementary ration containing a lime-sulphur compound and provitamins) on worm infestations in pigs. It was



found to have no effect on helminths, but the author found that animals with a light infection showed a better utilization of food. Lightly infested pigs fed a basic ration rich in phosphoric acid or lime put on more weight than worm-free pigs, and this was more pronounced when "Arcanum Hella" was added to the food. On the other hand, when the basic ration was rich in potash the addition of "Arcanum Hella" markedly lowered the rate of growth in worm-free pigs, while in lightly infested animals this was not so pronounced; when no "Arcanum Hella" was added to this diet all pigs thrived better.

A.E.F.

### 326—Zeitschrift für Infektionskrankheiten, Parasitäre Krankheiten und Hygiene der Haustiere.

- a. BAUDET, E. A. R. F., 1941.—"Ueber das Verhältnis der Anzahl Männchen und Weibchen der freilebenden Generation von *Strongyloides papillosus* (Wedl, 1856)." 57 (4), 288-296.

(326a) Baudet has examined the numbers of free-living *Strongyloides papillosus* males and females occurring in faecal cultures from stall and pasture fed sheep. In cultures incubated at 30° C. the number of males was small, whereas at 22° C. the author considers there were always sufficient males to fertilize all females. The effects of seasonal temperature changes on the sex ratios are discussed.

W.P.R.

### 327—Zentralblatt für Bakteriologie. Abteilung 1. Originale.

- a. VOGEL, H., 1941.—"Infektionsversuche an verschiedenen Bilharzia-Zwischenwirten mit einem einzelnen Miracidium von *Bilharzia mansoni* und *B. japonica*." 148 (1), 29-35.

(327a) In 10 series of experiments, in which *Planorbis guadalupensis* were exposed to a single miracidium of *Schistosoma mansoni*, the infection rate varied between 0.0% and 18.82%. Two similar series of experiments with *P. pfeifferi* produced infection with *S. mansoni* in 31.35% and 59.09% respectively. *Oncomelania hupensis* exposed to single-miracidium infections of *S. japonicum* showed, in 4 series, 0.0%, 6.98%, 4.2% and 14.68% infection respectively. In every case the cercariae from individual snails were of the same sex. Male and female cercariae could not be distinguished. The sex was determined by infecting mice. The ratio of male and female infections was found to be roughly 1:1. It is concluded that the preponderance of male worms in the final host, reported by many workers, is due to the lower resistance of the female worms to the host's defence mechanism.

A.E.F.

### 328—Zentralblatt für Chirurgie.

- \*a. WIEDHOPF, O., 1941.—"Beitrag zur chirurgischen Behandlung der Leberegelkrankheit." 68, 705-709.

### 329—Zoologica. New York.

- a. SMITH, G. M., COATES, C. W. & NIGRELLI, R. F., 1941.—"A papillomatous disease of the gallbladder associated with infection by flukes, occurring in the marine turtle, *Chelonia mydas* (Linnaeus)." 26 (1), 13-16.

## NON-PERIODICAL LITERATURE.

- 330—\*LEHRKE, K., 1941.—"Vergleichende Untersuchungen mit verschiedenen Flotationsmedien zur Wurmdiagnose bei unseren Haus- und Nutztieren." Dissertation, Hannover.
- 331—\*LEYHE, K., 1941.—"Filariosen bei Haus- und Tropicentieren." Dissertation, Hannover.
- 332—\*SCHULZE, H., 1941.—"Über das Vorkommen der Fuchstrichinose in den Kreisen Peine und Clausthal-Zellerfeld." Dissertation, Hannover.

Schulze examined 49 foxes from the Peine district (near Brunswick) and 139 from Clausthal-Zellerfeld (Harz). All of the former were negative for *Trichinella* but 2 of the latter were infected. No case of *Trichinella* in pigs has been reported from Peine (where all fox carcasses are buried) for 40 years, while 2 trichinous pigs have been found at Clausthal-Zellerfeld, where fox carcasses are used as bait or thrown on dungheaps. Schulze concludes that the proper disposal of dead foxes would prevent infection of pigs. [From an abstract in Dtsch. tierärztl. Wschr., 49, p. 419.]

A.E.F.

- 333—UNITED STATES DEPARTMENT OF AGRICULTURE, 1941.—"Index-catalogue of medical and veterinary zoology. Part 5. Authors: E to Fynney." Washington, D.C., pp. 1177-1458.



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